Appendix C – Summary of Storage Tanks Emissions Calculation

Appendix C, Table C-1
Potential to Emit (PTE) Annual POC Emissions for Altered Storage Tanks in Flexibility Service
(Tanks allowed to store petroleum-based and renewable-based materials)
(throughputs and emissions below are imposed as enforceable permit condition limits)
Phillips 66 Company - San Francisco Refinery, Rodeo, CA

Source #	Post-Project Status	Tank Number		POC Emissions[1]						
			Period	Roof Type	Vapor Control Efficiency	Stock	Avg. TVP (psia)	Throughput (bbl/yr)	POC Emissions (lb/yr)	POC Emissions (ton/yr)
122	Altered	Tank 167	NA[3]	EFRT	0%	Gasoline TVP 11.00	11.00	2,000,000	8,190.29	4.095
125	Altered	Tank 170	NA[4]	EFRT	0%	Renewable Naphtha	5.70	3,000,000	3,563.22	1.782
126	Altered	Tank 172	NA[3]	IFRT	0%	Gasoline RVP 9	9.00	594,845	3,364.00	1.682
139	Altered	Tank 204	Jul 2021 - Jun 2022	FixedRoof	98%	Light Coker Gas Oil	2.55	962,972	6,412.16	3.206
140	Altered	Tank 205	Sep 2015 - Aug 2016	FixedRoof	98%	Light Slop Oil	6.02	630,575	5,245.87	2.623
150	Altered	Tank 241	Jun 2018 - May 2019	EFRT	0%	Heavy Gas Oil	6.23	519,471	3,625.36	1.813
195	Altered	Tank 501	Mar 2021 - Feb 2022	FixedRoof	0%	Water Treatment Sludge	0.20	97,928	1,912.24	0.956
254	Altered	Tank 1001	Apr 2007 - Mar 2008	EFRT	0%	Gasoline	6.20	7,257,233	4,080.51	2.040
256	Altered	Tank 1003	Jun 2009 - May 2010	EFRT	0%	Diesel	0.30	4,024,700	606.29	0.303
257	Altered	Tank 1004	Sep 2020 - Aug 2021	IFRT	0%	CARB Diesel	0.30	3,568,973	355.26	0.178
341	Altered	Tank 208	NA[3]	EFRT	0%	Gasoline TVP 3.00	3.00	1,819,583	2,760.00	1.380
342	Altered	Tank 209	NA[3]	EFRT	0%	Diesel TVP 0.50	0.50	2,407,700	787.00	0.394

Notes:

1. Tank parameters, stock properties, and meteorological data used to calculate these emissions are available in the TankESP database and TanksESP Output Report.
2. Tanks 204 (S-139) and 205 (S-140) are on on vapor recovery to the fuel gas system.
3. Throughputs for Tanks 167 (S-122), 172 (S-126), 1010 (S-261), 107 (S-334), 108 (S-340), 208 (S-341), 209 (S-342), 110 (S-440), and 1007 (S-448) are based on permit condition limits and are thus modeled on a representative 12-month period. Throughputs and vapor pressures for other tanks are based on historical measured Pi tag data. Emissions for S-122 are from Application 13424. Emissions for S-126, S-341, and S-342 are from Application 27954.
4. Annual throughput and corresponding emissions for S-125 imposed as enforceable permit condition limits are based on 3,000,000 bbl/yr of renewable naphtha per Phillips 66's request. This limit is less than the annual throughput (of 6,687,105 bbl/yr) corresponding to the historical highest annual emissions. Daily throughput and emissions limits are based on historical highest daily emissions.

Appendix C, Table C-2

Potential to Emit (PTE) Annual TAC Emissions for Altered Storage Tanks in Flexibility Service
(Tanks allowed to store petroleum-based and renewable-based materials)
Phillips 66 Company - San Francisco Refinery, Rodeo, CA

Source #	Tank Number	Stock	TAC Emissions (lb/yr)[1]										
			Benzene	Cresol	Ethyl benzene	Hexane (n-)	Hydrogen sulfide	Naph thalene	Phenol	Propyl ene	Styrene	Toluene	Xylene (total)
122	Tank 167	Gasoline TVP 11.00	6.89	--	3.36	30.2	--	0.06	--	--	--	33.10	18.30
125	Tank 170	Renewable Naphtha	0.01	--	0.03	84.6	--	0.00	--	--	--	0.11	0.02
126	Tank 172	Gasoline RVP 9	1.31	--	0.80	5.7	--	0.02	--	--	--	6.89	4.44
139	Tank 204	Light Coker Gas Oil	0.67	--	0.13	--	0.87	0.00	--	--	--	0.18	0.19
140	Tank 205	Light Slop Oil	6.95	0.03	0.71	31.1	--	0.00	0.00	218.33	0.53	9.88	2.74
150	Tank 241	Heavy Gas Oil	5.03	--	1.67	22.6	--	0.01	--	--	--	21.13	8.75
195	Tank 501	Water Treatment Sludge	0.01	0.32	0.00	349.4	--	0.05	0.04	2,435.84	5.95	0.01	0.00
254	Tank 1001	Gasoline	6.98	--	6.66	28.3	--	0.17	--	--	--	46.06	37.70
256	Tank 1003	Diesel	0.02	0.05	0.77	0.4	0.36	0.83	0.82	--	--	4.85	3.92
257	Tank 1004	CARB Diesel	0.04	--	0.18	0.1	0.06	0.12	--	--	--	0.16	0.49
341	Tank 208	Gasoline TVP 3.00	0.50	--	1.10	1.7	--	1.10	--	--	--	4.50	6.20
342	Tank 209	Diesel TVP 0.50	0.40		1.00	1.5		1.00		--	--	4.10	5.60

Notes:

1. TAC emissions are calculated using TanksESP and are presented in TankESP Output Report. Emissions for S-126, S-341, and S-342 are from Application 27954.

Appendix C, Table C-3: TankESP Output Report for Tables C-1 and C-2
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	Atmospheric Pressure (psia)	Avg. Ambient Temp. (degF)	Avg. height of vapor space (ft)	Avg. Liquid Height (ft)	Avg. Liquid Surface Temp. (degF)	Avg. TVP (psia)	Avg. wind speed	Bulk Liquid Temperature (degF)	Cleaning loss (w/out control) (lbs)	Clingage Factor	Comments	Deck Fitting (w/o GP) Loss (lbs)	Deck fitting Emission Factor	Deck Seam Loss (lbs)	Delta Tv	Effective Antoines B	Effective CDB height (ft)	Effective Column Diameter (ft)	Effective height of liquid heel (ft)	Effective Roof Height (ft)	Effective sump height (ft)
155	14.7465	59.98184932	24	24	64.98355414	5.3174826	5.289589041	62.06209704	0	0.006		122.9313749		0	0	0	0	1	-1	0	0
156	14.7465	59.98184932	24	24	64.98355414	5.3978461	5.289589041	62.06209704	0	0.006		187.700637		0	0	0	0	1	-1	0	0
157	14.7465	59.98184932	24	24	64.98355414	6.207839985	5.289589041	62.06209704	0	0.006		223.286254		0	0	0	0	1	-1	0	0
158	14.7465	59.98184932	24	24	64.98355414	4.513413563	5.289589041	62.06209704	0	0.006		146.5977099		0	0	0	0	1	-1	0	0
159	14.7465	59.98184932	24	24	65.03991888	7.408017287	5.289589041	62.14261818	0	0.006		320.585309		0	0	0	0	1	-1	0	0
167	14.7465	59.98184932	24	24	64.91945056	11.001152	5.289589041	61.97052003	0	0.0015		1494.66639		0	0	0	0	1	-1	0	0
170	14.7465	59.98184932	24	24	64.91945056	5.6973434	5.289589041	61.97052003	0	0.0015		643.479039		0	0	0	0	1	-1	0	0
1001	14.7465	59.98184932	24	24	64.98355414	6.202795	5.289589041	62.06209704	0	0.0015		494.110668		0	0	0	0	1	-1	0	0
1003	14.7465	59.98184932	24	24	64.98355414	0.29999184	5.289589041	62.06209704	0	0.0015		60.7195843		0	0	0	0	1	-1	0	0
1004	14.7465	59.98184932	67.333333	24	62.50631783	0.295032028	5.289589041	61.16369315	0	0.0015		36.1824196	69.07	0	0	0	0	1	-1	43.333333	0
1007	14.7465	59.98184932	31.822917	30	62.52500627	10.990156	5.289589041	61.16369315	0	0.0015		14823.4812	696.33	0	0	0	0	1.1	-1	1.8229167	0
1010	14.7465	59.98184932	24	24	64.98355414	10.990156	5.289589041	62.06209704	0	0.0015		1838.13252		0	0	0	0	1	-1	0	0
107	14.7465	59.98184932	28	28	65.00694739	3.0011634	5.289589041	62.09551582	0	0.0015		377.976746		0	0	0	0	1	-1	0	0
108	14.7465	59.98184932	28	28	65.00694739	3.0011634	5.289589041	62.09551582	0	0.0015		386.949151		0	0	0	0	1	-1	0	0
110	14.7465	59.98184932	25.5	25.5	65.03142584	10.869927	5.289589041	62.13048513	0	0.0015		1434.53561		0	0	0	0	1	-1	0	0
172	14.7465	59.98184932	60.666667	24	62.46229314	9	5.289589041	61.16369315	0	0.0015		406.596765	40.63	0	0	0	0	1	-1	36.666667	0
200	14.7465	59.98184932	25.09375	24	62.56187904	9.191382588	5.289589041	61.16369315	0	0.0015		0	0	0		0	0	0	-1	1.09375	0
202	14.7465	59.98184932	25.25	24	62.59919415	3.150602191	5.289589041	61.16369315	0	0.0015		0	0	0		0	0	0	-1	1.25	0
204	14.7465	59.98184932	29.09375	28	62.51687449	2.552989454	5.289589041	61.16369315	0	0.0015		0	0	0		0	0	0	-1	1.09375	0
205	14.7465	59.98184932	21.041667	20	62.59919415	6.020771724	5.289589041	61.16369315	0	0.0015		0	0	0		0	0	0	-1	1.0416667	0
208	14.7465	59.98184932	28	28	64.89436958	3.0011634	5.289589041	61.93469041	0	0.0015		311.504446		0	0	0	0	1	-1	0	0
209	14.7465	59.98184932	28	28	64.89436958	0.5000736	5.289589041	61.93469041	0	0.0015		93.123675		0	0	0	0	1	-1	0	0
223	14.7465	59.98184932	29.25	28	62.55597157	0.90574271	5.289589041	61.16369315	0	0.0015		0	0	0		0	0	0	-1	1.25	0
241	14.7465	59.98184932	21	21	65.00449708	6.229975686	5.289589041	62.09201544	0	0.0015		678.93393		0	0	0	0	1	-1	0	0
257	14.7465	59.98184932	25.145833	24	62.5750686	1.002012729	5.289589041	61.16369315	0	0.0015		0	0	0		0	0	0	-1	1.1458333	0
271	14.7465	59.98184932	31.5625	30	62.59919415	9.406180025	5.289589041	61.16369315	0	0.0015		0	0	0		0	0	0	-1	1.5625	0
280	14.7465	59.98184932	25.5625	24	62.65748799	0.90574271	5.289589041	61.16369315	0	0.0015		0	0	0		0	0	0	-1	1.5625	0
281	14.7465	59.98184932	25.5625	24	62.65748799	0.90574271	5.289589041	61.16369315	0	0.0015		0	0	0		0	0	0	-1	1.5625	0
284	14.7465	59.98184932	25.5625	24	62.65748799	2.552989454	5.289589041	61.16369315	0	0.0015		0	0	0		0	0	0	-1	1.5625	0
285	14.7465	59.98184932	31.5625	30	62.59919415	4.4996517	5.289589041	61.16369315	0	0.0015		0	0	0		0	0	0	-1	1.5625	0
501	14.7465	59.98184932	7.8645833	7.5	62.58012412	0.196101259	5.289589041	61.16369315	0	0.0015		0	0	0		0	0	0	-1	0.36458333	0

Appendix C, Table C-3: TankESP Output Report for Tables C-1 and C-2
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	Effective wind speed	Estimated cleaning losses (lbs)	Estimated heating cycle Losses (lbs)	Estimated standing losses (lbs)	Estimated working losses (lbs)	Extrapolated Annual Throughput (bbl)	Flash Gas Abbreviation	Flash Gas Emissions (lbs)	Flash Gas Molecular Wt	Floating roof Emission Factor	Floating Roof Kd	Floating Roof Kr	Floating Roof Sd	Floating roof standing storage loss factor	H/D Ratio	Heating cycle Ke	Heating cycle loss (w/out control) (lbs)	Height of cone down bottom (ft)	Height of roof (ft)	Height of vapor space (ft)
155		0	0	905.187433	1469.692219	26700590.37		0	0		0		0.2		0.36923077	-1	0	0	0	0
156		0	0	984.801203	1788.80588	32498078.53		0	0		0		0.2		0.36923077	-1	0	0	0	0
157		0	0	1183.345963	2205.98598	40077185.74		0	0		0		0.2		0.36923077	-1	0	0	0	0
158		0	0	788.077838	2168.3083	39392677.19		0	0		0		0.2		0.36923077	-1	0	0	0	0
159		0	0	1719.084827	2152.28115	45117120.99		0	0		0		0.2		0.32	-1	0	0	0	0
167		0	0	8046.26609	144.021819	11228000		0	0		0		0.2		0.43636364	-1	0	0	0	0
170		0	0	3349.11404	214.103866	16842000		0	0		0		0.2		0.43636364	-1	0	0	0	0
1001		0	0	3638.31256	442.199933	40742103.44		0	0		0		0.2		0.36923077	-1	0	0	0	0
1003		0	0	295.371106	310.921984	22594664.38		0	0		0		0.2		0.36923077	-1	0	0	0	0
1004	0	0	0	79.5461331	275.7155244	20036214.87		0	0	121.07	0	0.4	0.2	121.07	0.36923077	-1	0	0	65	0
1007	0	0	0	16648.3645	110.9668949	12294660		0	0	766.33	0	0.4	0.2	766.33	0.34285714	-1	0	0	5.46875	0
1010		0	0	9469.875	333.665317	30742264		0	0		0		0.2		0.36923077	-1	0	0	0	0
107		0	0	1988.01065	491.999997	56140000		0	0		0		0.2		0.34782609	-1	0	0	0	0
108		0	0	1996.98306	491.999997	56140000		0	0		0		0.2		0.34782609	-1	0	0	0	0
110		0	0	10293.68778	182.796924	20210400		0	0		0		0.2		0.32692308	-1	0	0	0	0
172	0	0	0	1292.162406	42.8353296	3339459.8		0	0	84.63	0	0.4	0.2	84.63	0.43636364	-1	0	0	55	0
200	0	0	0	337.2729264	9168.30412	4274342.421		0	0	0	0	0	0	0	0.45714286	-1	0	0	3.28125	25.09375
202	0	0	0	904.643127	14590.50365	8870093.703		0	0	0	0	0	0	0	0.4	-1	0	0	3.75	25.25
204	0	0	0	703.287316	5708.868804	5406122.551		0	0	0	0	0	0	0	0.53333333	-1	0	0	3.28125	29.09375
205	0	0	0	333.568878	4912.29826	3540045.664		0	0	0	0	0	0	0	0.4	-1	0	0	3.125	21.041667
208		0	0	1534.674828	120.1106773	10215139		0	0		0		0.2		0.46666667	-1	0	0	0	0
209		0	0	458.788187	201.50342	13516828		0	0		0		0.2		0.46666667	-1	0	0	0	0
223	0	0	0	694.703261	2128.496939	5208330.682		0	0	0	0	0	0	0	0.46666667	-1	0	0	3.75	29.25
241		0	0	3591.07467	34.29025561	2916308.057		0	0		0		0.2		0.35	-1	0	0	0	0
257	0	0	0	386.870056	2182.864928	6684815.214		0	0	0	0	0	0	0	0.43636364	-1	0	0	3.4375	25.145833
271	0	0	0	5736.21369	6717.69178	3270336.114		0	0	0	0	0	0	0	0.4	-1	0	0	4.6875	31.5625
280	0	0	0	1008.499759	6503.32384	15552157.76		0	0	0	0	0	0	0	0.32	-1	0	0	4.6875	25.5625
281	0	0	0	1008.499759	6985.2635	16724874.97		0	0	0	0	0	0	0	0.32	-1	0	0	4.6875	25.5625
284	0	0	0	1364.765459	8002.61287	7426804.981		0	0	0	0	0	0	0	0.32	-1	0	0	4.6875	25.5625
285	0	0	0	741.32835	6000.46438	6067444.723		0	0	0	0	0	0	0	0.4	-1	0	0	4.6875	31.5625
501	0	0	0	344.525283	1567.711226	549767.0725		0	0	0	0	0	0	0	0.42857143	-1	0	0	1.09375	7.8645833

Appendix C, Table C.3: TankESP Output Report for Tables C.1 and C.2
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	Includes a landing loss?	Includes a tank cleaning?	Initial RP?	Is a vapor control device used?	Kb	Kc	Ke	Kf per slotted pole	Kf per unslotted pole	Kn	Kp	Ks	Loss from incoming vapors (lbs)	Loss from resident vapors (lbs)	Low-volume liquid temperature (degF)	Max. Ambient Temp. (degF)	Max. Liquid Surface Temp. (degF)	Max. TVP (psia)
155	N	N	N	N	1	0	0	0			1	1	0	0	59.98184932	68.47643836	64.98355414	5.3174826
156	N	N	N	N	1	0	0	0			1	1	0	0	59.98184932	68.47643836	64.98355414	5.3978461
157	N	N	N	N	1	0	0	0			1	1	0	0	59.98184932	68.47643836	64.98355414	6.207839985
158	N	N	N	N	1	0	0	0			1	1	0	0	59.98184932	68.47643836	64.98355414	4.513413563
159	N	N	N	N	1	0	0	0			1	1	0	0	59.98184932	68.47643836	65.03991888	7.408017287
167	N	N	N	N	1	1	0	0		1	1	1	0	0	59.98184932	68.47643836	64.91945056	11.001152
170	N	N	N	N	1	1	0	0		1	1	1	0	0	59.98184932	68.47643836	64.91945056	5.6973434
1001	N	N	N	N	1	1	0	0			1	1	0	0	59.98184932	68.47643836	64.98355414	6.202795
1003	N	N	N	N	1	1	0	0			1	1	0	0	59.98184932	68.47643836	64.98355414	0.29999184
1004	N	N	N	N	1	1	0	0	14		1	1	0	0	59.98184932	68.47643836	62.50631783	0.295032028
1007	N	N	N	N	1	1	0	0	14	1	1	1	0	0	59.98184932	68.47643836	62.52500627	10.990156
1010	N	N	N	N	1	1	0	0		1	1	1	0	0	59.98184932	68.47643836	64.98355414	10.990156
107	N	N	N	N	1	1	0	0		1	1	1	0	0	59.98184932	68.47643836	65.00694739	3.0011634
108	N	N	N	N	1	1	0	0		1	1	1	0	0	59.98184932	68.47643836	65.00694739	3.0011634
110	N	N	N	N	1	1	0	0		1	1	1	0	0	59.98184932	68.47643836	65.03142584	10.869927
172	N	N	N	N	1	1	0	0	14	1	1	1	0	0	59.98184932	68.47643836	62.46229314	9
200	N	N	N	N		1		0	0	1	1		0	0	59.98184932	68.47643836	67.46622575	9.191382588
202	N	N	N	N		1		0	0	1	1		0	0	59.98184932	68.47643836	67.48061887	3.150602191
204	N	N	N	N		1		0	0	1	1		0	0	59.98184932	68.47643836	67.44886665	2.552989454
205	N	N	N	N		1		0	0	1	1		0	0	59.98184932	68.47643836	67.48061887	6.020771724
208	N	N	N	N	1	1	0	0		1	1	1	0	0	59.98184932	68.47643836	64.89436958	3.0011634
209	N	N	N	N	1	1	0	0		1	1	1	0	0	59.98184932	68.47643836	64.89436958	0.5000736
223	N	N	N	N		1		0	0		1	0	0	0	59.98184932	68.47643836	67.46394702	0.90574271
241	N	N	N	N	1	1	0	0		1	1	1	0	0	59.98184932	68.47643836	65.00449708	6.229975686
257	N	N	N	N		1		0	0		1		0	0	59.98184932	68.47643836	67.47131332	1.002012729
271	N	N	N	N		1		0	0	1	1		0	0	59.98184932	68.47643836	67.48061887	9.92530037
280	N	N	N	N	1	1		0	0	1	1	0	0	0	59.98184932	68.47643836	67.50310405	0.90574271
281	N	N	N	N	1	1		0	0	1	1	0	0	0	59.98184932	68.47643836	67.50310405	0.90574271
284	N	N	N	N		1		0	0	1	1		0	0	59.98184932	68.47643836	67.50310405	2.552989454
285	N	N	N	N	1	1		0	0	1	1	0	0	0	59.98184932	68.47643836	67.48061887	4.4996517
501	N	N	N	N		1		0	0		1		0	0	59.98184932	68.47643836	67.47326318	0.225840499

Tank ID	Met. Data City	Met. Data State	Min. Ambient Temp. (degF)	Min. Liquid Surface Temp. (degF)	Min. TVP (psia)	Net working height (ft)	Nominal operating pressure (psia)	Non Routine Emissions (lbs)	Number of Columns
155	Rodeo	CA	51.48726027	64.98355414	5.3174826	46	0	0	0
156	Rodeo	CA	51.48726027	64.98355414	5.3978461	46	0	0	0
157	Rodeo	CA	51.48726027	64.98355414	6.207839985	46	0	0	0
158	Rodeo	CA	51.48726027	64.98355414	4.513413563	46	0	0	0
159	Rodeo	CA	51.48726027	65.03991888	7.408017287	46	0	0	0
167	Rodeo	CA	51.48726027	64.91945056	11.001152	46	0	0	0
170	Rodeo	CA	51.48726027	64.91945056	5.6973434	46	0	0	0
1001	Rodeo	CA	51.48726027	64.98355414	6.202795	46	0	0	0
1003	Rodeo	CA	51.48726027	64.98355414	0.29999184	46	0	0	0
1004	Rodeo	CA	51.48726027	62.50631783	0.295032028	46	0	0	0
1007	Rodeo	CA	51.48726027	62.52500627	10.990156	58	0	0	19
1010	Rodeo	CA	51.48726027	64.98355414	10.990156	46	0	0	0
107	Rodeo	CA	51.48726027	65.00694739	3.0011634	54	0	0	0
108	Rodeo	CA	51.48726027	65.00694739	3.0011634	54	0	0	0
110	Rodeo	CA	51.48726027	65.03142584	10.869927	49	0	0	0
172	Rodeo	CA	51.48726027	62.46229314	9	46	0	0	0
200	Rodeo	CA	51.48726027	57.65753224	9.191382588	46	0	0	0
202	Rodeo	CA	51.48726027	57.71776927	3.150602191	46	0	0	0
204	Rodeo	CA	51.48726027	57.58488226	2.552989454	54	0	0	0
205	Rodeo	CA	51.48726027	57.71776927	6.020771724	38	0	0	0
208	Rodeo	CA	51.48726027	64.89436958	3.0011634	54	0	0	0
209	Rodeo	CA	51.48726027	64.89436958	0.5000736	54	0	0	0
223	Rodeo	CA	51.48726027	57.64799604	0.90574271	54	0	0	0
241	Rodeo	CA	51.48726027	65.00449708	6.229975686	40	0	0	0
257	Rodeo	CA	51.48726027	57.67882396	1.002012729	46	0	0	0
271	Rodeo	CA	51.48726027	57.71776927	8.906107752	58	0	0	0
280	Rodeo	CA	51.48726027	57.81187185	0.90574271	46	0	0	0
281	Rodeo	CA	51.48726027	57.81187185	0.90574271	46	0	0	0
284	Rodeo	CA	51.48726027	57.81187185	2.552989454	46	0	0	0
285	Rodeo	CA	51.48726027	57.71776927	4.4996517	58	0	0	0
501	Rodeo	CA	51.48726027	57.6869849	0.169974749	13	0	0	0

Appendix C, Table C-3: TankESP Output Report for Tables C-1 and C-2
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	Number of Days	Number of Days Cleaning	Number of turnovers	Stock Product	Report End Date	Report Start Date	Resident loss limit (lbs)	Rim seal Emission Factor	Rim Seal Loss (lbs)	Rim Seal Loss Factor Exponent	Rim Seal Loss Factor Kra	Rim Seal Loss Factor Krb	Roof landing loss (lbs)
155	365	0	43.73070181	Crude-Blended-TK155			-1		728.293753	1	0.4	0.4	0
156	365	0	53.22593082	Crude-Heavy Diluted-TK156			-1		742.11425	1	0.4	0.4	0
157	365	0	65.63912739	Multiple			-1		893.988888	1	0.4	0.4	0
158	365	0	64.51802731	Multiple			-1		597.251767	1	0.4	0.4	0
159	365	0	55.50232128	Multiple			-1		1314.267683	1	0.4	0.4	0
167	365	0	25.684394	Gasoline TVP 11.00			-1		6024.09497	1	0.4	0.4	0
170	365	0	38.526591	Renewable Naphtha-TK170			-1		2487.7897	1	0.4	0.4	0
1001	365	0	66.72814219	Gasoline-TK1001			-1		2927.30568	1	0.4	0.4	0
1003	365	0	37.0059428	Diesel-TK1003			-1		218.464579	1	0.4	0.4	0
1004	365	0	32.81566911	Multiple			-1	52	34.16535	1	0.4	0.4	0
1007	365	0	8.8129753	Gasoline TVP 10.99			-1	70	1520.73588	1	0.4	0.4	0
1010	365	0	50.350227	Gasoline TVP 10.99			-1		7105.28262	1	0.4	0.4	0
107	365	0	51.066608	Gasoline TVP 3.00			-1		1519.14704	1	0.4	0.4	0
108	365	0	51.066608	Gasoline TVP 3.00			-1		1519.14704	1	0.4	0.4	0
110	365	0	21.579419	Gasoline TVP 10.87			-1		8343.95382	1	0.4	0.4	0
172	365	0	7.6391166	Gasoline RVP 9			-1	44	671.808403	1	0.4	0.4	0
200	365	0	10.73106937	Multiple			-1	0	0	0	0	0	0
202	365	0	17.04974949	Multiple			-1	0	0	0	0	0	0
204	365	0	11.56175194	Multiple			-1	0	0	0	0	0	0
205	365	0	11.86138456	Multiple			-1	0	0	0	0	0	0
208	365	0	16.726233	Gasoline TVP 3.00			-1		1132.283492	1	0.4	0.4	0
209	365	0	22.132407	Diesel TVP 0.50			-1		338.494049	1	0.4	0.4	0
223	365	0	8.528102565	Multiple			-1	0	0	0	0	0	0
241	365	0	6.446456111	Multiple			-1		2689.46578	1	0.4	0.4	0
257	365	0	15.29171966	Multiple			-1	0	0	0	0	0	0
271	365	0	3.190744262	Multiple			-1	0	0	0	0	0	0
280	365	0	19.13200216	Multiple			-1	0	0	0	0	0	0
281	365	0	20.57465908	Multiple			-1	0	0	0	0	0	0
284	365	0	9.136330281	Multiple			-1	0	0	0	0	0	0
285	365	0	5.919778245	Cracked Naphtha-TK285			-1	0	0	0	0	0	0
501	365	0	43.955113	Water Treatment Sludge			-1	0	0	0	0	0	0

Tank ID	Roof landing loss limit (lbs)	Roof Reflectivity (alpha)	Roof Type	Routine Emissions (lbs)	RVP	Saturation Factor (Sa)	Seam Emission Factor	Shell Reflectivity (alpha)	Slotted pole Emission Factor	Slotted Pole Loss (lbs)	Solar insolation	Standing loss (w/out control) (lbs)
155	0	0.25	EFRT	2374.87964	0	0	0	0.25	0	0		905.187433
156	0	0.25	EFRT	2773.6071	0	0	0	0.25	0	0		984.801203
157	0	0.25	EFRT	3389.33195	0	0	0	0.25	0	0		1183.345963
158	0	0.25	EFRT	2956.38611	0	0	0	0.25	0	0		788.077838
159	0	0.25	EFRT	3871.36598	0	0	0	0.25	0	0		1719.084827
167	0	0.25	EFRT	8190.28791	0	0	0	0.25	0	0		8046.26609
170	0	0.25	EFRT	3563.2179	0	0	0	0.25	0	0		3349.11404
1001	0	0.25	EFRT	4080.51249	0	0	0	0.25	0	0		3638.31256
1003	0	0.25	EFRT	606.293093	0	0	0	0.25	0	0		295.371106
1004	0	0.25	IFRT	355.261659	0	0	0	0.25	0	0		79.5461331
1007	0	0.25	IFRT	16759.3316	0	0	0	0.25	0	0		16648.3645
1010	0	0.25	EFRT	9803.54032	0	0	0	0.25	0	0		9469.875
107	0	0.25	EFRT	2480.01065	0	0	0	0.25	0	0		1988.01065
108	0	0.25	EFRT	2488.98307	0	0	0	0.25	0	0		1996.98306
110	0	0.25	EFRT	10476.48487	0	0	0	0.25	0	0		10293.68778
172	0	0.25	IFRT	1334.99773	0	0	0	0.25	0	0		1292.162406
200	0	0.25	FixedRoof	9505.57695	0	0	0	0.25	0	0		16863.64621
202	0	0.25	FixedRoof	15495.14684	0	0	0	0.25	0	0		45232.1566
204	0	0.25	FixedRoof	6412.15614	0	0	0	0.25	0	0		35164.3658
205	0	0.25	FixedRoof	5245.86715	0	0	0	0.25	0	0		16678.444
208	0	0.25	EFRT	1654.78551	0	0	0	0.25	0	0		1534.674828
209	0	0.25	EFRT	660.291608	0	0	0	0.25	0	0		458.788187
223	0	0.25	FixedRoof	2823.200221	0	0	0	0.25	0	0		34735.163
241	0	0.25	EFRT	3625.36491	0	0	0	0.25	0	0		3591.07467
257	0	0.25	FixedRoof	2569.734996	0	0	0	0.25	0	0		19343.50275
271	0	0.25	FixedRoof	12453.90539	0	0	0	0.25	0	0		286810.6819
280	0	0.25	FixedRoof	7511.8236	0	0	0	0.25	0	0		50424.988
281	0	0.25	FixedRoof	7993.76325	0	0	0	0.25	0	0		50424.988
284	0	0.25	FixedRoof	9367.37827	0	0	0	0.25	0	0		68238.2727
285	0	0.25	FixedRoof	6741.79272	0	0	0	0.25	0	0		37066.4174
501	0	0.25	FixedRoof	1912.23651	0.5	0	0	0.25	0	0		344.525283

Appendix C, Table C-3: TankESP Output Report for Tables C-1 and C-2
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

					Throughput (bbl/yr)							Vapor Control Efficiency				
Tank ID	Tank base area (ft2)	Tank Diameter (ft)	Tank Height (ft)	Tank Type	Throughput (bbl)	Total estimated emissions (lbs)	Unslotted pole Emission Factor	Unslotted Pole Loss (lbs)	Vapor control efficiency for Refill/Initial purge	Vapor Density	Vapor Pressure Function (P*)	Vapor Space Temperature (degF)	VCtrl Efficiency	Vent Pressure Range (psig)	Volume of vapor space (ft3)	Working loss (w/out control) (lbs)
155	13273.229	130	48	EFRT	4756072.37	2374.87964		53.9623028	0		0.11133994	0	0	0	0	1469.692219
156	13273.229	130	48	EFRT	5788756.41	2773.6071		54.9863205	0		0.11345279	0	0	0	0	1788.80588
157	13273.229	130	48	EFRT	7138793.33	3389.33195		66.0708193	0			0	0	0	0	2205.98598
158	13273.229	130	48	EFRT	7016864.49	2956.38611		44.2283617	0			0	0	0	0	2168.3083
159	17671.459	150	48	EFRT	8036537.42	3871.36598		84.2318354	0			0	0	0	0	2152.28115
167	9503.3178	110	48	EFRT	1999999.97	8190.28791		527.50474	0		0.32981692	0	0	0	0	144.021819
170	9503.3178	110	48	EFRT	2999999.99	3563.2179		217.845311	0		0.12148062	0	0	0	0	214.103866
1001	13273.229	130	48	EFRT	7257232.57	4080.51249		216.896211	0		0.13561213	0	0	0	0	442.199933
1003	13273.229	130	48	EFRT	4024699.72	606.293093		16.1869461	0		0.005138213	0	0	0	0	310.921984
1004	13273.229	130	48	domed EFRT	3568973.09	355.261659	14	9.19836345	0			0	0	0	0	275.7155244
1007	24052.819	175	60	cone-roof tank w	2190000	16759.3316	14	304.147165	0		0.3291636	0	0	0	0	110.9668949
1010	13273.229	130	48	EFRT	5475999.98	9803.54032		526.459838	0		0.3291636	0	0	0	0	333.665317
107	20358.306	161	56	EFRT	10000000.02	2480.01065		90.8868759	0		0.056826085	0	0	0	0	491.999997
108	20358.306	161	56	EFRT	10000000.02	2488.98307		90.8868759	0		0.056826085	0	0	0	0	491.999997
110	19113.45	156	51	EFRT	3599999.96	10476.48487		515.198437	0		0.32212253	0	0	0	0	182.796924
172	9503.3178	110	48	domed EFRT	594844.999	1334.99773	14	213.757223	0		0.23133898	0	0	0	0	42.8353296
200	8659.0148	105	48	FRT (no floating	761372.008	9505.57695	0	0	0		0	63.96006509	0.98	0.06	217287.15	458415.204
202	11309.734	120	48	FRT (no floating	1579995.305	15495.14684	0	0	0		0	64.03469498	0.98	0.06	285570.77	729525.1761
204	8659.0148	105	56	FRT (no floating	962971.598	6412.15614	0	0	0		0	63.87005567	0.98	0.06	251923.21	285443.4395
205	7853.9816	100	40	FRT (no floating	630574.576	5245.86715	0	0	0		0	64.03469498	0.98	0.06	165260.86	245614.912
208	11309.734	120	56	EFRT	1819583.04	1654.78551		90.8868759	0		0.056826085	0	0	0	0	120.1106773
209	11309.734	120	56	EFRT	2407700	660.291608		27.1704624	0		0.008624704	0	0	0	0	201.50342
223	11309.734	120	56	FRT (no floating	927739.7071	2823.200221	0	0	0		0	63.94824999	0.98	0.06	330809.71	106424.8475
241	11309.734	120	42	EFRT	519470.6144	3625.36491		222.674936	0			0	0	0	0	34.29025561
257	9503.3178	110	48	FRT (no floating	1190740.158	2569.734996	0	0	0		0	63.98644405	0.98	0.06	238968.84	109143.2477
271	17671.459	150	60	FRT (no floating	582532.262	12453.90539	0	0	0		0	64.03469498	0.98	0.06	557755.41	335884.586
280	17671.459	150	48	FRT (no floating	2270245.42	7511.8236	0	0	0		0	64.15128317	0.98	0.06	451726.66	325166.193
281	17671.459	150	48	FRT (no floating	2979137	7993.76325	0	0	0		0	64.15128317	0.98	0.06	451726.66	349263.174
284	17671.459	150	48	FRT (no floating	1322907.915	9367.37827	0	0	0		0	64.15128317	0.98	0.06	451726.66	400130.6419
285	17671.459	150	60	FRT (no floating	1080770.358	6741.79272	0	0	0		0	64.03469498	0.98	0.06	557755.41	300023.2213
501	962.11275	35	15	FRT (no floating	97927.8723	1912.23651	0	0	0		0	63.99655502	0	0.06	7566.6159	1567.711226

Tank ID	Acetaldehyde	Acetic acid	Acetic anhydride(acetic acid anhydride)	Acetonitrile	Acrylamide	Acrylic acid(2-propenoic acid)	Acrylonitrile(2-propenenitrile)	Allyl alcohol	Allyl chloride(3-chloro-1-propene)	Ammonia	Aniline
155	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
107	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
284	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

Appendix C, Table C-3: TankESP Output Report for Tables C-1 and C-2
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

			Benzene					
Tank ID	Anthracene	Benz[a]anthracene	Benzene	Benzo[g,h,i]perylene	Benzo[a]pyrene	Biphenyl	Butadiene (1,3)	Butane
155	0.004115183	no data	3.495487942	0.005290892	no data	0.352784809	0	0
156	0.005008705	no data	4.807620917	0.006439701	no data	0.429376228	0	0
157	0.006176811	no data	5.589867529	0.00794155	no data	0.529502338	0	0
158	0.006071309	no data	5.372135565	0.00780591	no data	0.520454188	0	0
159	0.006026449	no data	5.909930386	0.007748212	no data	0.516627932	0	0
167	0.001325213	no data	6.89198267	0.000446468	no data	0	0	0
170	no data	no data	0.012002846	no data	no data	no data	no data	no data
1001	0.004068411	no data	6.978149237	0.00137082	no data	0	0	0
1003	0.001865726	no data	0.018406094	0.002891574	no data	0.516948975	0	0
1004	0.00493544	no data	0.035518329	0	no data	3.889169362	0	0.5037
1007	0.001021263	no data	12.3247553	0.000343997	no data	0	0	0
1010	0.003069972	no data	8.855635854	0.001034362	no data	0	0	0
107	0.004526594	no data	7.848155587	0.0015252	no data	0	0	0
108	0.004526595	no data	7.873465505	0.0015252	no data	0	0	0
110	0.001682009	no data	8.940692296	0.00056667	no data	0	0	0
172	0.00039412	no data	1.308285415	0.00013279	no data	0	0	0
200	0	no data	8.150429541	0	no data	0.000726674	0	0
202	7.90384E-08	no data	0.009020361	1.26376E-15	no data	0.001714588	0	0
204	1.83153E-05	no data	0.671687289	0	no data	0	17.50413729	0
205	0	no data	6.946412551	0	no data	0.000621146	0	0
208	0.001105167	no data	4.899875899	0.000372343	no data	0	0	0
209	0.001209201	no data	0.0164058	0.001873982	no data	0.335254239	0	0
223	0	no data	0	0	no data	0.001020709	0	0
241	0.000315634	no data	5.027874876	0.0001063	no data	0	0	0
257	0	no data	30.73969033	0	no data	0.001455142	0	0
271	0	no data	7.386584	0	no data	0	9.444638231	0
280	0	no data	0	0	no data	0.002722465	0	0
281	0	no data	0	0	no data	0.002975776	0	0
284	0	no data	0	0	no data	0	0	0
285	0	no data	8.432790831	0	no data	0	10.77815354	0
501	0	no data	0.014631902	0	no data	0.007105374	0	0

Tank ID	Butanol (2)	Butene (1)	Butene (2-methyl-1)	Butene (2-methyl-2) {isopentene}	Butene (cis-2) {(Z)-2-butene}	Butene (trans-2({(E)-2-butene}	Butyl acetate (n-)	Butyl alcohol (n-) {butanol (1)}	Butyl alcohol (t-)	Butyl chloride (n-) {1-chlorobutane}	Butyl ether (di-(n)-)	Butylbenzene (n-)	Butylbenzene (sec-)	Carbon disulfide	Carbon tetrachloride	Carbonyl sulfide	Chlorobenzene	Chloroethane	Chloroform	Chloroprene (2-chloro-1,3-butadiene)	Chlorotoluene (o-) {1-chloro-2-methylbenzene}	Chrysene	Chrysene {benzo[a]phenanthrene}
155	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
107	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
284	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

	Cresol													
Tank ID	Cresol	Cresol (m-)	Cresol (o-)	Cresol (p-)	Cumene {isopropylbenzene}	Cyclohexane	Cyclohexanol	Cyclohexanone	Cyclohexene	Cyclopentadiene	Cyclopentane	Cyclopentanone	Cyclopentene	Decane (n-)
155	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
156	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
157	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
158	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
159	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
167	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
170	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
1001	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
1003	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
1004	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
1007	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
1010	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
107	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
108	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
110	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
172	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
200	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
202	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
204	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
205	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
208	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
209	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
223	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
241	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
257	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
271	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
280	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
281	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
284	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
285	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data
501	[illegible]	no data	no data	no data	[illegible]	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data

Appendix C, Table C-3: TankESP Output Report for Tables C-1 and C-2
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	DGM ether (diethylene glycol monomethyl ether)	Dibromoethane (1,2) (ethylene dibromide)	Dibromopropane (1,2)	Dibromopropane (1,3)	Dichloroethane (1,1)	Dichloroethane (1,2)	Dichloroethylene (1,2)(1,2 dichloroethene)	Dichloroethylene (trans-1,2)	Dichlorotoluene (3,4)	Diethanolamine (DEA)	Diethoxyethane (1,1)	Diethoxymethane	Diethylbenzene (1,2)	Diethylbenzene (1,4)	Diethyl (n,n) aniline (N,N-diethylbenzenamine)	Diethyl ketone (3-pentanone)	Diethyl sulfide
155	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
107	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
284	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

Tank ID	Diethylamine	Diethylbenzene (1,3)	Di-isopropyl ether	Dimethoxyethane (1,2)	Dimethylpentane (2,2)	Dimethyl butane (2,2)	Dimethyl butane (2,3)	Dimethyl cyclopentane (1,1)	Dimethyl formamide (n,n)	Dimethyl hydrazine (1,1)	Dimethyl phthalate	Dimethyl sulfide	Dimethyl-2-ethylbenzene (1,3)	Dimethyl-2-ethylbenzene (1,4)	Dimethylhexane (2,4)	Dimethylpentane (2,3)	Dimethylpentane (2,4)
155	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
107	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
284	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

Appendix C, Table C-3: TankESP Output Report for Tables C-1 and C-2
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/O ratio: calculated

Tank ID	Dimethylpentane (3,3)	Dioxane (1,4)	Dipropyl ether (di-n-propyl ether)	DMN (2,6) (2,6-dimethylnaphthalene)	Dodecane (n-)	Epichlorohydrin (chloromethyl oxirane)	Ethanol (ethyl alcohol)	Ethylpentane (3)	Ethyl acetate	Ethyl acrylate (ethyl ester 2-propenoic acid)
155	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
107	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
284	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

				Ethylbenzene									
Tank ID	Ethyl chloride	Ethyl ether (diethyl ether)	Ethylamine	Ethylbenzene	Ethylcyclohexane	Ethylcyclopentane	Ethylene	Ethylene glycol	Ethyleneoxide	Fluoranthene	Fluorobenzene	Formic acid	[illegible]
155	no data	no data	no data	1.523479183	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	0.233773555	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	0.28598394	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	0.280258801	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	0.282157871	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	3.35641969	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	0.027548649	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	6.659009037	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	0.774745953	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	0.178099172	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	4.316351637	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	5.948227994	no data	no data	no data	no data	no data	no data	no data	no data	no data
107	no data	no data	no data	7.430628868	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	7.437121106	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	4.312077542	no data	no data	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	0.800464543	no data	no data	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	0.837563531	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	0.267930664	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	0.129201869	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	0.714074834	no data	no data	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	2.580842757	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	0.583383418	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	0.091271779	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	1.665948929	no data	no data	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	4.279906733	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	2.15362974	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	0.242247995	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	0.262332698	no data	no data	no data	no data	no data	no data	no data	no data	no data
284	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	2.459749059	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	0.0005237	no data	no data	no data	no data	no data	no data	no data	no data	no data

								Hexane					Hydrogen Sulfide (H2S)						
Tank ID	Freon 11 (trichlorofluoromethane)	Furan	Furfural (2-furancarboxaldehyde)	Heneicosane (n)	Heptane (n-)	Heptene (1)	Hexadiene (1,5)	Hexane (n-)	Hexanol (1)	Hexene (1)	Hydrogen cyanide (hydrocyanic acid)	Hydrogen fluoride	Hydrogen sulfide	Indene	Iso-butane	isobutene (methylpropene (2))	Isobutyl alcohol (2-methyl 1-propanol)	Iso-octane (2,2,4 trimethylpentane)	Isopentane (2-methylbutane)
155	no data	no data	no data	no data	no data	no data	no data	24.05147235	no data	no data	no data	no data	17.96774582	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	15.42742563	no data	no data	no data	no data	19.27217186	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	17.59427559	no data	no data	no data	no data	20.11311469	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	16.77874074	no data	no data	no data	no data	18.47392415	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	19.0875767	no data	no data	no data	no data	24.45947243	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	30.22947564	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	84.60732213	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	28.34847313	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	0.422685758	no data	no data	no data	no data	0.360172618	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	0.116816376	no data	no data	no data	no data	0.055713677	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	55.4842458	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	37.70741754	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
107	no data	no data	no data	no data	no data	no data	no data	31.92327082	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	32.03838055	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	no data	no data	no data	no data	39.23655575	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	no data	no data	no data	5.650423271	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	36.45909298	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	no data	no data	no data	0.465341235	no data	no data	no data	no data	1.387311732	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.873228418	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	31.07241071	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	21.35810232	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	0.382382798	no data	no data	no data	no data	0.335057427	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.942004428	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	22.61003551	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	215.2866532	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	7.325363216	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	2.498963203	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	2.678974742	no data	no data	no data	no data	no data	no data
284	no data	no data	no data	no data	no data	no data	no data	1.360360899	no data	no data	no data	no data	1.211781668	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	8.362177263	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	349.4487664	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data

Appendix C, Table C-3: TankESP Output Report for Tables C-1 and C-2
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

								Mercury (all) pollutant			
Tank ID	Isoprene (2-methyl 1,3-butadiene)	Isopropyl alcohol (isopropanol)	Isopropyl benzene (cumene)	isopropylbenzene (1-methyl-2)	Isopropyltoluene (p-)	Lead	MDI (methylene diphenyl diisocyanate)	Mercury	Methacrylonitrile (2-methyl 2-propenenitrile)	Methane	Methanol (methyl alcohol)
155	no data	no data	no data	no data	no data	4E-05	no data	7.4E-06	no data	no data	no data
156	no data	no data	no data	no data	no data	0	no data	1.8E-05	no data	no data	no data
157	no data	no data	no data	no data	no data	0	no data	2.2E-05	no data	no data	no data
158	no data	no data	no data	no data	no data	0	no data	2.2E-05	no data	no data	no data
159	no data	no data	no data	no data	no data	0	no data	2.2E-05	no data	no data	no data
167	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
1003	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
1004	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
1007	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
1010	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
107	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
108	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
110	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
172	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
200	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
202	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
204	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
205	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
208	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
209	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
223	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
241	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
257	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
271	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
280	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
281	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
284	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
285	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data
501	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data

Tank ID	Methylhexane (2)	Methyl acrylate (methyl ester 2-propenoic acid)	Methyl ethyl ketone (2-butanone)	Methyl isobutyl ketone (hexone)	Methyl methacrylate	Methyl propyl ether	Methyl styrene (alpha)	Methyl-2-ethylbenzene (1)	Methylcyclohexane	Methylcyclopentane
155	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
107	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
284	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

Tank ID	Methyldichlorosilane	Methylene chloride (dichloromethane)	Methylheptane (2)	Methylheptane (3)	Methylheptane (4)	Methylhexane (2) (isoheptane)	Methylhexane (3)	Methylnaphthalene (1-)	Methylnaphthalene (2-)	Methyloctane (4)	Methylpentane (2) (isohexane)	Methylpentane (3)
155	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
107	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
284	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

Appendix C, Table C-3: TankESP Output Report for Tables C-1 and C-2
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

			Methyl tertiary-butyl ether	Naphthalene																						Phenol										Propylene					Styrene						
Tank ID	Monoethanolamine (MEA)	Morpholine	MTBE (Methyl tert-butyl ether)	Naphthalene	Neopentane (dimethylpropane (2,2))	Nickel	Nitrates (Propyl nitrate)	Nitrobenzene	Nitromethane	Nonadecane (n)	Nonane (n-)	Octadecane (n)	Octane (n-)	Octanol (1)	Octene (1)	PACs (Chrysene)	PAHs	Pentachloroethane	Pentadiene (1,2)	Pentadiene (1,4)	Pentadiene (2,3)	Pentane (n-)	Pentene (1)	Pentyne (1)	Phenanthrene	Phenol	Phosgene	Picoline (3) {3-methyl pyridine}	Propane	Propanethiol (1)	Propanethiol (2)	Propyl alcohol (n) {propanol (1)}	Propylamine (n) {1-propanamine}	Propylbenzene (n-)	Propylcyclohexane	Propylene	Propylene glycol (1,2) {1,2 propanediol}	Propylene oxide	Pyridine	Resorcinol	Styrene	Tetra ethyl lead	Tetrachloroethane (1,1,1,2)	Tetrachloroethane (1,1,2,2)	Tetrachloroethylene	Tetradecane (n-)	Tetrahydrofuran
155	no data	no data	0	0.690655664	no data	0.0343	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.074954303	0.208108418	no data	no data	no data	no data	no data	no data	no data	0.205463511	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
156	no data	no data	0	0.840459904	no data	0.093	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.0912291	0.253294913	no data	no data	no data	no data	no data	no data	no data	0.250075639	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
157	no data	no data	0	1.036252781	no data	0.1147	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.112505285	0.312367615	no data	no data	no data	no data	no data	no data	no data	0.308397444	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
158	no data	no data	0	1.018473932	no data	0.1128	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.110583723	0.307032453	no data	no data	no data	no data	no data	no data	no data	0.303130051	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
159	no data	no data	0	1.011323352	no data	0.1119	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.109766339	0.304763012	no data	no data	no data	no data	no data	no data	no data	0.300889646	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
167	no data	no data	0	0.057456667	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.003672556	0.00429185	no data	no data	no data	no data	no data	no data	no data	0.002707714	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	0.004327876	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	0	0.173495674	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.011276098	0.013177558	no data	no data	no data	no data	no data	no data	no data	0.008313443	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
1003	no data	no data	0	0.827483597	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.007026837	0.123653673	no data	no data	no data	no data	no data	no data	no data	0.110970828	0.823675221	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
1004	no data	no data	0.187317889	0.124836633	no data	0.0005	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.008685039	0.183929827	no data	no data	no data	no data	no data	no data	no data	0.106702562	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
1007	no data	no data	0	0.04556879	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.002829656	0.003306813	no data	no data	no data	no data	no data	no data	no data	0.00208635	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
1010	no data	no data	0	0.131652141	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.008508466	0.009943226	no data	no data	no data	no data	no data	no data	no data	0.006273031	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
107	no data	no data	0	0.19305201	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.012546	0.0146616	no data	no data	no data	no data	no data	no data	no data	0.009249695	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
108	no data	no data	0	0.193057188	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.012546	0.0146616	no data	no data	no data	no data	no data	no data	no data	0.009249695	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
110	no data	no data	0	0.072970196	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.004661322	0.005447348	no data	no data	no data	no data	no data	no data	no data	0.003436718	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
172	no data	no data	0	0.016922317	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.001092301	0.001276493	no data	no data	no data	no data	no data	no data	no data	0.00080532	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
200	no data	no data	0	0.005375886	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	0	0.004336052	no data	no data	no data	no data	no data	no data	no data	no data	no data	256.1001768	no data	no data	no data	no data	0.61668007	no data	no data	no data	no data	no data	no data
202	no data	no data	0	0.008296261	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.86059E-13	5.03387E-12	no data	no data	no data	no data	no data	no data	no data	9.49039E-07	0.00618523	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
204	no data	no data	0	0.000945614	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.02183E-11	1.82569E-10	no data	no data	no data	no data	no data	no data	no data	6.66689E-06	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
205	no data	no data	0	0.004588614	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	0	0.0037057	no data	no data	no data	no data	no data	no data	no data	no data	no data	218.3344881	no data	no data	no data	no data	0.5258173	no data	no data	no data	no data	no data	no data
208	no data	no data	0	0.047742368	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.003062822	0.003579298	no data	no data	no data	no data	no data	no data	no data	0.002258153	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
209	no data	no data	0	0.539669938	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.004553977	0.080137911	no data	no data	no data	no data	no data	no data	no data	0.071919137	0.538069095	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
223	no data	no data	0	0.002192946	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
241	no data	no data	0	0.01436914	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000874402	0.00102185	no data	no data	no data	no data	no data	no data	no data	0.000644737	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
257	no data	no data	0	0.006097408	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
271	no data	no data	0	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.05173874	no data	no data	no data	no data	no data	no data
280	no data	no data	0	0.005833729	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
281	no data	no data	0	0.006350471	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
284	no data	no data	0	0.001706529	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data
285	no data	no data	0	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.05909868	no data	no data	no data	no data	no data	no data
501	no data	no data	0	0.052241457	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	0	0.042389563	no data	no data	no data	no data	no data	no data	no data	no data	no data	2435.843207	no data	no data	no data	no data	5.95291147	no data	no data	no data	no data	no data	no data

Appendix C, Table C-3: TankESP Output Report for Tables C-1 and C-2
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

		Toluene																					Xylene				
Tank ID	Tetramethylbenzene (1,2,4,5)	Toluene	Toluene diisocyanate	Trichloroethane (1,1,1)	Trichloroethane (1,1,2)	Trichloroethylene	Trichloropropane (1,2,3)	Tridecane (n-)	Triethanolamine (TEA)	Trifluoroethane (1,1,2-trichloro-1,2,2)	Trimethylbenzene (1,2,3)	Trimethylbenzene (1,2,4)	Trimethylbenzene (1,3,5)	Trimethylchlorosilane (chlorotrimethylsilane)	Trimethylcyclohexane (1,1,3)	Trimethylcyclopentane (1,1,3)	Trimethylpentane (2,2,3)	Trimethylpentane (2,2,4)	Trimethylpentane (2,3,3)	Undecane (n-)	Vinyl acetate (acetic acid ethenyl ester)	Vinylidene chloride (1,1-dichloro ethene)	Xylene	Xylene (m-)	Xylene (o-)	Xylene (p-)	Zinc compounds
155	no data	5.830079287	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.468[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	6.855433477	no data	no data	no data	0.001091246
156	no data	14.62378311	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.2149[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.500678797	no data	no data	no data	0
157	no data	17.62945536	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.189[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	6.735783818	no data	no data	no data	0
158	no data	17.18170575	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.09[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	6.603353758	no data	no data	no data	0
159	no data	17.74737917	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.0749[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	6.636661348	no data	no data	no data	0
167	no data	33.10391535	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.173[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	18.29783572	no data	no data	no data	0
170	no data	0.109928829	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.020608192	no data	no data	no data	no data
1001	no data	46.06285631	no data	no data	no data	no data	no data	no data	no data	no data	no data	11.31[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	37.70296418	no data	no data	no data	0
1003	no data	4.847432987	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.552[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.924568287	no data	no data	no data	0
1004	no data	0.15710291	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.74[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.491580144	no data	no data	no data	0
1007	no data	52.46961066	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.906[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	22.85099707	no data	no data	no data	0
1010	no data	48.83017535	no data	no data	no data	no data	no data	no data	no data	no data	no data	8.917[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	33.12959065	no data	no data	no data	0
107	no data	51.5805042	no data	no data	no data	no data	no data	no data	no data	no data	no data	12.59[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	42.05895657	no data	no data	no data	0
108	no data	51.67957839	no data	no data	no data	no data	no data	no data	no data	no data	no data	12.60[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	42.09185264	no data	no data	no data	0
110	no data	42.79020549	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.319[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	23.48821917	no data	no data	no data	0
172	no data	6.888637205	no data	no data	no data	no data	no data	no data	no data	no data	no data	1.157[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.438296588	no data	no data	no data	0
200	no data	11.59221828	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.139[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.209259964	no data	no data	no data	0
202	no data	5.906591753	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.063[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	1.054091113	no data	no data	no data	0
204	no data	0.180243573	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.015[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.19440107	no data	no data	no data	0
205	no data	9.881009948	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.119[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.736170917	no data	no data	no data	0
208	no data	24.28286999	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.390[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	14.15350249	no data	no data	no data	0
209	no data	4.026127438	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.374[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.920762549	no data	no data	no data	0
223	no data	3.585384517	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.027[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.27857088	no data	no data	no data	0
241	no data	21.12543059	no data	no data	no data	no data	no data	no data	no data	no data	no data	1.349[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	8.748311787	no data	no data	no data	0
257	no data	43.94293859	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.589[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	15.88942186	no data	no data	no data	0
271	no data	16.42156934	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.434[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	6.520562428	no data	no data	no data	0
280	no data	9.511626451	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.073[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.739408445	no data	no data	no data	0
281	no data	10.28062114	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.079[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.800829139	no data	no data	no data	0
284	no data	0.240494028	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.013[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	0
285	no data	18.75114199	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.496[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	7.447573543	no data	no data	no data	0
501	no data	0.007483129	no data	no data	no data	no data	no data	no data	no data	no data	no data	1.354[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.003044538	no data	no data	no data	0

Appendix C, Table C-4

Potential to Emit (PTE) Daily POC Emissions for Altered Storage Tanks in Flexibility Service
(Tanks allowed to store petroleum-based and renewable-based materials)
(throughputs and emissions below are imposed as enforceable permit condition limits)
Phillips 66 Company - San Francisco Refinery, Rodeo, CA

Source #	Post-Project Status	Tank Number	POC Emissions[1]					
			Roof Type	Vapor Control Efficiency	Stock	Avg. TVP (psia)	Max Daily Throughput (bbl/day)[3]	POC Emissions (lb/day)[3]
122	Altered	Tank 167	EFRT	0%	Gasoline TVP 11.00	11.00	5,479	22
125	Altered	Tank 170	EFRT	0%	Reformate-TK170	4.51	29,918	10
126	Altered	Tank 172	IFRT	0%	Gasoline RVP 9	9.00	28,800	9.2
139	Altered	Tank 204	FixedRoof	98%	Light Coker Gas Oil-TK204	1.42	35,145	49
140	Altered	Tank 205	FixedRoof	98%	Naphtha-TK205	5.42	56,107	94
150	Altered	Tank 241	EFRT	0%	Gasoline-TK241	6.51	31,655	15
195	Altered	Tank 501	FixedRoof	0%	Water Treatment Sludge	0.15	711	9
254	Altered	Tank 1001	EFRT	0%	Gasoline-TK1001	6.20	138,362	21
256	Altered	Tank 1003	EFRT	0%	Gasoline-TK1003	6.20	111,383	20
257	Altered	Tank 1004	IFRT	0%	Gasoline-TK1004	6.20	42,438	6
341	Altered	Tank 208	EFRT	0%	Gasoline TVP 3.00	3.00	12,000	7.6
342	Altered	Tank 209	EFRT	0%	Diesel TVP 0.50	0.50	12,000	2.2

Notes:

1. Tank parameters, stock properties, and meteorological data used to calculate these emissions are available in the TankESP database.

2. Tanks 204 (S-139) and 205 (S-140) are on on vapor recovery (A-7) to the fuel gas system.

3. Throughputs are based on maximum historical daily throughputs, except for S-122, S-126, S-341, and S-342. Emissions for S-122 are based on a daily throughput of 5,479 bbl/day (dividing the Condition #22963 throughput limit of 2,000,000 bbl/yr by 365), which will serve as an enforceable permit condition to limit the maximum daily throughput. Throughputs and emissions for S-126, S-341, and S-342 are from Application 27954.

Appendix C, Table C-5
Potential to Emit (PTE) Hourly Throughput TAC Emissions for Altered Storage Tanks in Flexibility Service
Phillips 66 Company - San Francisco Refinery, Rodeo, CA

Source #	Tank Number	Stock	TAC Emissions (lbs/hour)										
			Benzene	Cresol	Ethyl benzene	Hexane (n-)	Hydrogen sulfide	Naph thalene	Phenol	Propyl ene	Styrene	Toluene	Xylene (total)
122	Tank 167	Gasoline TVP 11.00	7.87E-04	0.00E+00	3.83E-04	3.45E-03	0.00E+00	6.56E-06	0.00E+00	0.00E+00	0.00E+00	3.78E-03	2.09E-03
125	Tank 170	Reformate-TK170	1.46E-03	0.00E+00	3.57E-03	7.06E-03	0.00E+00	2.87E-04	0.00E+00	0.00E+00	1.11E-04	2.17E-02	1.73E-02
126	Tank 172	Gasoline RVP 9	4.00E-03	0.00E+00	3.00E-03	4.00E-03	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	1.00E-03	1.50E-02
139	Tank 204	Light Coker Gas Oil-TK204	2.64E-04	0.00E+00	4.72E-05	0.00E+00	3.92E-04	3.09E-07	0.00E+00	0.00E+00	0.00E+00	6.85E-05	7.08E-05
140	Tank 205	Naphtha-TK205	6.71E-03	0.00E+00	8.05E-04	4.37E-02	0.00E+00	2.57E-06	0.00E+00	0.00E+00	0.00E+00	1.07E-02	3.17E-03
150	Tank 241	Gasoline-TK241	1.12E-03	0.00E+00	1.25E-03	4.44E-03	0.00E+00	3.41E-05	0.00E+00	0.00E+00	0.00E+00	8.10E-03	7.11E-03
195	Tank 501	Water Treatment Sludge	2.86E-06	7.54E-05	1.08E-07	6.74E-02	0.00E+00	1.17E-05	1.00E-05	4.27E-01	1.24E-03	1.50E-06	6.31E-07
254	Tank 1001	Gasoline-TK1001	2.29E-03	0.00E+00	4.45E-03	7.74E-03	0.00E+00	1.37E-04	0.00E+00	0.00E+00	0.00E+00	2.39E-02	2.57E-02
256	Tank 1003	Gasoline-TK1003	2.05E-03	0.00E+00	3.64E-03	7.16E-03	0.00E+00	1.10E-04	0.00E+00	0.00E+00	0.00E+00	2.00E-02	2.10E-02
257	Tank 1004	Gasoline-TK1004	5.91E-04	0.00E+00	1.33E-03	1.88E-03	0.00E+00	4.20E-05	0.00E+00	0.00E+00	0.00E+00	6.85E-03	7.72E-03
341	Tank 208	Gasoline TVP 3.00	2.00E-03	0.00E+00	6.00E-03	9.00E-03	0.00E+00	6.00E-03	0.00E+00	0.00E+00	0.00E+00	2.30E-02	3.20E-02
342	Tank 209	Diesel TVP 0.50	1.00E-03	0.00E+00	1.00E-03	2.00E-03	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	6.00E-03	1.00E-03

Notes:

1. TAC emissions are calculated using TanksESP and are presented in TankESP Output Report. Emissions for S-122 are based on dividing the annual TAC emissions (from Appendix C, Table C-2) by 8760. Emissions for S-126, S-341, and S-342 are from Application 27954.

Appendix C, Table C-6: TankESP Output Report for Tables C-4 and C-5
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	Atmospheric Pressure (psia)	Avg. Ambient Temp. (degF)	Avg. height of vapor space (ft)	Avg. Liquid Height (ft)	Avg. Liquid Surface Temp. (degF)	Avg. TVP (psia)	Avg. wind speed	Bulk Liquid Temperature (degF)	Cleaning loss (w/out control) (lbs)	Clingage Factor	Comments	Deck Fitting (w/o GP) Loss (lbs)	Deck fitting Emission Factor	Deck Seam Loss (lbs)	Delta Tv	Effective Antoines B
167	14.7465	51.905	24	24	53.813246	6.0315257	4.2	52.673566	0	0.0015		44.913105	87.819943	0	0	0
167	14.7465	53.655	24	24	56.230663	6.0315257	4.6	54.692375	0	0.0015		41.41223	89.810742	0	0	0
167	14.7465	53.84	24	24	58.464913	6.0315257	4.6	55.702732	0	0.0015		45.849254	89.810742	0	0	0
167	14.7465	57.695	24	24	62.987329	6.0315257	5.4	59.826541	0	0.0015		46.08161	93.606678	0	0	0
167	14.7465	60.79	24	24	68.394785	6.0315257	7	63.852907	0	0.0015		50.841569	100.63165	0	0	0
167	14.7465	65.97	24	24	73.837992	6.0315257	6.7	69.138916	0	0.0015		48.641714	99.362101	0	0	0
167	14.7465	67.94	24	24	75.927061	6.0315257	6.9	71.156873	0	0.0015		50.649919	100.21063	0	0	0
167	14.7465	67.01	24	24	73.900368	6.0315257	6.2	69.785168	0	0.0015		49.274173	97.200559	0	0	0
167	14.7465	65.925	24	24	71.361466	6.0315257	5.2	68.114594	0	0.0015		45.664974	92.678502	0	0	0
167	14.7465	64.625	24	24	68.892704	6.0315257	4.2	66.343863	0	0.0015		44.913105	87.819943	0	0	0
167	14.7465	58.555	24	24	60.820455	6.0315257	3.6	59.467436	0	0.0015		42.026975	84.690453	0	0	0
167	14.7465	51.525	24	24	53.862524	6.0315257	4.8	52.466462	0	0.0015		46.303452	90.781417	0	0	0
170	14.7465	51.905	24	24	53.813246	4.513171	4.2	52.673566	0	0.0015		34.76602	90.671792	0	0	0
170	14.7465	53.655	24	24	56.230663	4.513171	4.6	54.692375	0	0.0015		32.039387	92.685821	0	0	0
170	14.7465	53.84	24	24	58.464913	4.513171	4.6	55.702732	0	0.0015		35.472178	92.685821	0	0	0
170	14.7465	57.695	24	24	62.987329	4.513171	5.4	59.826541	0	0.0015		35.620594	96.5292	0	0	0
170	14.7465	60.79	24	24	68.394785	4.513171	7	63.852907	0	0.0015		39.248868	103.65191	0	0	0
170	14.7465	65.97	24	24	73.837992	4.513171	6.7	69.138916	0	0.0015		37.558426	102.36381	0	0	0
170	14.7465	67.94	24	24	75.927061	4.513171	6.9	71.156873	0	0.0015		39.103567	103.22469	0	0	0
170	14.7465	67.01	24	24	73.900368	4.513171	6.2	69.785168	0	0.0015		38.061251	100.17155	0	0	0
170	14.7465	65.925	24	24	71.361466	4.513171	5.2	68.114594	0	0.0015		35.305681	95.589056	0	0	0
170	14.7465	64.625	24	24	68.892704	4.513171	4.2	66.343863	0	0.0015		34.76602	90.671792	0	0	0
170	14.7465	58.555	24	24	60.820455	4.513171	3.6	59.467436	0	0.0015		32.561716	87.508248	0	0	0
170	14.7465	51.525	24	24	53.862524	4.513171	4.8	52.466462	0	0.0015		35.815033	93.668244	0	0	0
204	14.7465	51.905	[illegible]	[illegible]	[illegible]	[illegible]	4.2	[illegible]	0	0.0015		0	0	0	10.319881	0
204	14.7465	53.655	[illegible]	[illegible]	[illegible]	[illegible]	4.6	[illegible]	0	0.0015		0	0	0	[illegible]	0
204	14.7465	53.84	[illegible]	[illegible]	[illegible]	[illegible]	4.6	[illegible]	0	0.0015		0	0	0	[illegible]	0
204	14.7465	57.695	[illegible]	[illegible]	[illegible]	[illegible]	5.4	[illegible]	0	0.0015		0	0	0	[illegible]	0
204	14.7465	60.79	[illegible]	[illegible]	[illegible]	[illegible]	7	[illegible]	0	0.0015		0	0	0	[illegible]	0
204	14.7465	65.97	[illegible]	[illegible]	[illegible]	[illegible]	6.7	[illegible]	0	0.0015		0	0	0	[illegible]	0
204	14.7465	67.94	[illegible]	[illegible]	[illegible]	[illegible]	6.9	[illegible]	0	0.0015		0	0	0	[illegible]	0
204	14.7465	67.01	[illegible]	[illegible]	[illegible]	[illegible]	6.2	[illegible]	0	0.0015		0	0	0	[illegible]	0
204	14.7465	65.925	[illegible]	[illegible]	[illegible]	[illegible]	5.2	[illegible]	0	0.0015		0	0	0	[illegible]	0
204	14.7465	64.625	[illegible]	[illegible]	[illegible]	[illegible]	4.2	[illegible]	0	0.0015		0	0	0	[illegible]	0
204	14.7465	58.555	[illegible]	[illegible]	[illegible]	[illegible]	3.6	[illegible]	0	0.0015		0	0	0	[illegible]	0
204	14.7465	51.525	[illegible]	[illegible]	[illegible]	[illegible]	4.8	[illegible]	0	0.0015		0	0	0	11.267939	0
205	14.7465	51.905	[illegible]	[illegible]	[illegible]	[illegible]	4.2	[illegible]	0	0.0015		0	0	0	10.141619	0
205	14.7465	53.655	[illegible]	[illegible]	[illegible]	[illegible]	4.6	[illegible]	0	0.0015		0	0	0	16.430072	0
205	14.7465	53.84	[illegible]	[illegible]	[illegible]	[illegible]	4.6	[illegible]	0	0.0015		0	0	0	17.65295	0
205	14.7465	57.695	[illegible]	[illegible]	[illegible]	[illegible]	5.4	[illegible]	0	0.0015		0	0	0	19.233561	0
205	14.7465	60.79	[illegible]	[illegible]	[illegible]	[illegible]	7	[illegible]	0	0.0015		0	0	0	22.447662	0
205	14.7465	65.97	[illegible]	[illegible]	[illegible]	[illegible]	6.7	[illegible]	0	0.0015		0	0	0	26.817734	0
205	14.7465	67.94	[illegible]	[illegible]	[illegible]	[illegible]	6.9	[illegible]	0	0.0015		0	0	0	27.196223	0
205	14.7465	67.01	[illegible]	[illegible]	[illegible]	[illegible]	6.2	[illegible]	0	0.0015		0	0	0	25.076871	0
205	14.7465	65.925	[illegible]	[illegible]	[illegible]	[illegible]	5.2	[illegible]	0	0.0015		0	0	0	23.267878	0
205	14.7465	64.625	[illegible]	[illegible]	[illegible]	[illegible]	4.2	[illegible]	0	0.0015		0	0	0	[illegible]	0
205	14.7465	58.555	[illegible]	[illegible]	[illegible]	[illegible]	3.6	[illegible]	0	0.0015		0	0	0	[illegible]	0
205	14.7465	51.525	[illegible]	[illegible]	[illegible]	[illegible]	4.8	[illegible]	0	0.0015		0	0	0	11.100576	0
241	14.7465	51.905	21	21	[illegible]	6.507905	4.2	[illegible]	0	0.0015		[illegible]	[illegible]	0	0	0
241	14.7465	53.655	21	21	[illegible]	6.507905	4.6	[illegible]	0	0.0015		[illegible]	[illegible]	0	0	0
241	14.7465	53.84	21	21	[illegible]	6.507905	4.6	[illegible]	0	0.0015		[illegible]	[illegible]	0	0	0
241	14.7465	57.695	21	21	63.078485	6.507905	5.4	59.956765	0	0.0015		57.973092	98.385848	0	0	0
241	14.7465	60.79	21	21	68.525722	6.507905	7	64.040032	0	0.0015		63.739684	105.46074	0	0	0
241	14.7465	65.97	21	21	73.973512	6.507905	6.7	69.332517	0	0.0015		61.018111	104.18264	0	0	0
241	14.7465	67.94	21	21	76.064633	6.507905	6.9	71.353404	0	0.0015		63.511879	105.0369	0	0	0
241	14.7465	67.01	21	21	74.019049	6.507905	6.2	69.954714	0	0.0015		61.876163	102.00608	0	0	0
241	14.7465	65.925	21	21	71.455105	6.507905	5.2	68.248364	0	0.0015		57.477243	97.450563	0	0	0
241	14.7465	64.625	21	21	68.966212	6.507905	4.2	66.448874	0	0.0015		56.685164	92.552469	0	0	0
241	14.7465	58.555	21	21	60.859476	6.507905	3.6	59.52318	0	0.0015		53.143449	89.395171	0	0	0
241	14.7465	51.525	21	21	53.902786	6.507905	4.8	52.52398	0	0.0015		58.34116	95.538523	0	0	0
501	14.7465	51.905	7.8645833	7.5	52.909161	0.14651763	4.2	52.36175	0	0.0015		0	0	0	10.182915	0
501	14.7465	53.655	7.8645833	7.5	55.010371	0.15569148	4.6	54.2715	0	0.0015		0	0	0	16.510302	0
501	14.7465	53.84	7.8645833	7.5	56.273731	0.16144311	4.6	54.947	0	0.0015		0	0	0	17.691156	0
501	14.7465	57.695	7.8645833	7.5	60.47994	0.18193706	5.4	58.96175	0	0.0015		0	0	0	19.268643	0
501	14.7465	60.79	7.8645833	7.5	64.791806	0.20524019	7	62.61025	0	0.0015		0	0	0	22.451709	0
501	14.7465	65.97	7.8645833	7.5	70.110311	0.23749231	6.7	67.85325	0	0.0015		0	0	0	26.85402	0
501	14.7465	67.94	7.8645833	7.5	72.142968	0.25092293	6.9	69.85175	0	0.0015		0	0	0	27.232814	0
501	14.7465	67.01	7.8645833	7.5	70.635864	0.24090409	6.2	68.65925	0	0.0015		0	0	0	25.122864	0
501	14.7465	65.925	7.8645833	7.5	68.785788	0.22907774	5.2	67.22625	0	0.0015		0	0	0	23.335276	0
501	14.7465	64.625	7.8645833	7.5	66.87076	0.21736634	4.2	65.6465	0	0.0015		0	0	0	20.083065	0
501	14.7465	58.555	7.8645833	7.5	59.747133	0.17821297	3.6	59.09725	0	0.0015		0	0	0	14.897889	0
501	14.7465	51.525	7.8645833	7.5	52.755057	0.14586363	4.8	52.0845	0	0.0015		0	0	0	11.139347	0
1001	14.7465	51.905	24	24	53.838021	6.202795	4.2	52.708958	0	0.0015		40.473259	75.82281	0	0	0
1001	14.7465	53.655	24	24	56.264102	6.202795	4.6	54.740146	0	0.0015		37.064147	77.193156	0	0	0
1001	14.7465	53.84	24	24	58.524957	6.202795	4.6	55.78851	0	0.0015		41.035306	77.193156	0	0	0
1001	14.7465	57.695	24	24	63.056038	6.202795	5.4	59.924697	0	0.0015		40.779233	79.871651	0	0	0
1001	14.7465	60.79	24	24	68.493516	6.202795	7	63.993952	0	0.0015		44.282116	85.033536	0	0	0
1001	14.7465	65.97	24	24	73.94014	6.202795	6.7	69.284843	0	0.0015		42.469779	84.082419	0	0	0
1001	14.7465	67.94	24	24	76.030755	6.202795	6.9	71.305007	0	0.0015		44.150127	84.717267	0	0	0
1001	14.7465	67.01	24	24	73.989824	6.202795	6.2	69.912963	0	0.0015		43.219301	82.481068	0	0	0
1001	14.7465	65.925	24	24	71.432046	6.202795	5.2	68.215423	0	0.0015		40.514571	79.209075	0	0	0
1001	14.7465	64.625	24	24	68.94811	6.202795	4.2	66.423015	0	0.0015		40.473259	75.82281	0	0	0
1001	14.7465	58.555	24	24	60.849867	6.202795	3.6	59.509453	0	0.0015		38.336027	73.720236	0	0	0
1001	14.7465	51.525	24	24	53.892871	6.202795	4.8	52.509816	0	0.0015		41.313543	77.870096	0	0	0
1003	14.7465	51.905	24	24	53.838021	6.202795	4.2	52.708958	0	0.0015		65.731921	109.05042	0	0	0
1003	14.7465	53.655	24	24	56.264102	6.202795	4.6	54.740146	0	0.0015		60.563194	111.41809	0	0	0
1003	14.7465	53.84	24	24	58.524957	6.202795	4.6	55.78851	0	0.0015		67.052108	111.41809	0	0	0
1003	14.7465	57.695	24	24	63.056038	6.202795	5.4	59.924697	0	0.0015		67.32587	115.95764	0	0	0
1003	14.7465	60.79	24	24	68.493516	6.202795	7	63.993952	0	0.0015		74.237169	124.43921	0	0	0
1003	14.7465	65.97	24	24	73.94014	6.202795	6.7	69.284843	0	0.0015		71.025252	122.89911	0	0	0
1003	14.7465	67.94	24	24	76.030755	6.202795	6.9	71.305007	0	0.0015		73.957081	123.92812	0	0	0
1003	14.7465	67.01	24	24	73.989824	6.202795	6.2	69.912963	0	0.0015		71.956145	120.2842	0	0	0
1003	14.7465	65.925	24	24	71.432046	6.202795	5.2	68.215423	0	0.0015		66.729891	114.84469	0	0	0
1003	14.7465	64.625	24	24	68.94811	6.202795	4.2	66.423015	0	0.0015		65.731921	109.05042	0	0	0
1003	14.7465	58.555	24	24	60.849867	6.202795	3.6	59.509453	0	0.0015		61.602765	105.34772	0	0	0
1003	14.7465	51.525	24	24	53.892871	6.202795	4.8	52.509816	0	0.0015		67.69585	112.57585	0	0	0
1004	14.7465	51.905	67.333333	24	52.880637	6.202795	4.2	52.36175	0	0.0015		41.862616	69.07	0	0	0
1004	14.7465	53.655	67.333333	24	54.97187	6.202795	4.6	54.2715	0	0.0015		37.811395	69.07	0	0	0
1004	14.7465	53.84	67.333333	24	56.204599	6.202795	4.6	54.947	0	0.0015		41.862616	69.07	0	0	0
1004	14.7465	57.695	67.333333	24	60.400832	6.202795	5.4	58.96175	0	0.0015		40.512209	69.07	0	0	0
1004	14.7465	60.79	67.333333	24	64.678131	6.202795	7	62.61025	0	0.0015		41.862616	69.07	0	0	0
1004	14.7465	65.97	67.333333	24	69.992702	6.202795	6.7	67.85325	0	0.0015		40.512209	69.07	0	0	0
1004	14.7465	67.94	67.333333	24	72.023579	6.202795	6.9	69.85175	0	0.0015		41.862616	69.07	0	0	0
1004	14.7465	67.01	67.333333	24	70.532868	6.202795	6.2	68.65925	0	0.0015		41.862616	69.07	0	0	0
1004	14.7465	65.925	67.333333	24	68.704525	6.202795	5.2	67.22625	0	0.0015		40.512209	69.07	0	0	0
1004	14.7465	64.625	67.333333	24	66.806967	6.202795	4.2	65.6465	0	0.0015		41.862616	69.07	0	0	0
1004	14.7465	58.555	67.333333	24	59.713269	6.202795	3.6	59.09725	0	0.0015		40.512209	69.07	0	0	0
1004	14.7465	51.525	67.333333	24	52.720116	6.202795	4.8	52.0845	0	0.0015		41.862616	69.07	0	0	0

Appendix C, Table C-6: TankESP Output Report for Tables C-4 and C-5
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	Effective CDB Height (ft)	Effective Column Diameter (ft)	Effective height of liquid heel (ft)	Effective Roof Height (ft)	Effective sump height (ft)	Effective wind speed	Estimated cleaning losses (lbs)	Estimated heating cycle Losses (lbs)	Estimated standing losses (lbs)	Estimated working losses (lbs)	Extrapolated Annual Throughput (bbl)	Flash Gas Abbreviation	Flash Gas Emissions (lbs)
167	0	1	-1	0	0	4.2	0	0	217.9722	66.70176	57145147		0
167	0	1	-1	0	0	4.6	0	0	209.05991	60.246751	57145147		0
167	0	1	-1	0	0	4.6	0	0	231.45919	66.70176	57145147		0
167	0	1	-1	0	0	5.4	0	0	249.97292	64.550091	57145147		0
167	0	1	-1	0	0	7	0	0	311.6074	66.70176	57145147		0
167	0	1	-1	0	0	6.7	0	0	291.91554	64.550091	57145147		0
167	0	1	-1	0	0	6.9	0	0	308.28844	66.70176	57145147		0
167	0	1	-1	0	0	6.2	0	0	285.01241	66.70176	57145147		0
167	0	1	-1	0	0	5.2	0	0	243.49174	64.550091	57145147		0
167	0	1	-1	0	0	4.2	0	0	217.9722	66.70176	57145147		0
167	0	1	-1	0	0	3.6	0	0	191.26749	64.550091	57145147		0
167	0	1	-1	0	0	4.8	0	0	238.18566	66.70176	57145147		0
170	0	1	-1	0	0	4.2	0	0	163.11576	70.364912	61305219		0
170	0	1	-1	0	0	4.6	0	0	156.37574	63.555404	61305219		0
170	0	1	-1	0	0	4.6	0	0	173.13028	70.364912	61305219		0
170	0	1	-1	0	0	5.4	0	0	186.83713	68.095076	61305219		0
170	0	1	-1	0	0	7	0	0	232.64654	70.364912	61305219		0
170	0	1	-1	0	0	6.7	0	0	217.98311	68.095076	61305219		0
170	0	1	-1	0	0	6.9	0	0	230.18186	70.364912	61305219		0
170	0	1	-1	0	0	6.2	0	0	212.89714	70.364912	61305219		0
170	0	1	-1	0	0	5.2	0	0	182.02443	68.095076	61305219		0
170	0	1	-1	0	0	4.2	0	0	163.11576	70.364912	61305219		0
170	0	1	-1	0	0	3.6	0	0	143.24634	68.095076	61305219		0
170	0	1	-1	0	0	4.8	0	0	178.12499	70.364912	61305219		0
204	0	0	-1	1.09375	0	0	0	0	25.674923	1484.4698	72016782		0
204	0	0	-1	1.09375	0	0	0	0	41.497062	1334.891	72016782		0
204	0	0	-1	1.09375	0	0	0	0	48.945847	1472.7747	72016782		0
204	0	0	-1	1.09375	0	0	0	0	51.245202	1413.2944	72016782		0
204	0	0	-1	1.09375	0	0	0	0	61.374881	1446.7669	72016782		0
204	0	0	-1	1.09375	0	0	0	0	71.188956	1385.9147	72016782		0
204	0	0	-1	1.09375	0	0	0	0	74.098019	1426.5761	72016782		0
204	0	0	-1	1.09375	0	0	0	0	68.367802	1431.3847	72016782		0
204	0	0	-1	1.09375	0	0	0	0	61.694793	1391.0405	72016782		0
204	0	0	-1	1.09375	0	0	0	0	54.421991	1443.4571	72016782		0
204	0	0	-1	1.09375	0	0	0	0	38.664091	1417.4352	72016782		0
204	0	0	-1	1.09375	0	0	0	0	28.726677	1484.5912	72016782		0
205	0	0	-1	1.0416667	0	0	0	0	11.851644	2914.1424	114969410		0
205	0	0	-1	1.0416667	0	0	0	0	20.34408	2620.3946	114969410		0
205	0	0	-1	1.0416667	0	0	0	0	24.460049	2890.6804	114969410		0
205	0	0	-1	1.0416667	0	0	0	0	25.804634	2773.8245	114969410		0
205	0	0	-1	1.0416667	0	0	0	0	31.447878	2839.1131	114969410		0
205	0	0	-1	1.0416667	0	0	0	0	36.601598	2719.666	114969410		0
205	0	0	-1	1.0416667	0	0	0	0	38.117064	2799.4429	114969410		0
205	0	0	-1	1.0416667	0	0	0	0	34.953552	2809.0674	114969410		0
205	0	0	-1	1.0416667	0	0	0	0	31.263003	2730.1372	114969410		0
205	0	0	-1	1.0416667	0	0	0	0	27.250054	2833.2182	114969410		0
205	0	0	-1	1.0416667	0	0	0	0	18.735348	2782.4886	114969410		0
205	0	0	-1	1.0416667	0	0	0	0	13.518655	2914.2994	114969410		0
241	0	1	-1	0	0	4.2	0	0	277.18198	64.775168	64863800		0
241	0	1	-1	0	0	4.6	0	0	265.87575	58.506603	64863800		0
241	0	1	-1	0	0	4.6	0	0	294.36244	64.775168	64863800		0
241	0	1	-1	0	0	5.4	0	0	317.97112	62.685646	64863800		0
241	0	1	-1	0	0	7	0	0	396.51825	64.775168	64863800		0
241	0	1	-1	0	0	6.7	0	0	371.43602	62.685646	64863800		0
241	0	1	-1	0	0	6.9	0	0	392.28635	64.775168	64863800		0
241	0	1	-1	0	0	6.2	0	0	362.61126	64.775168	64863800		0
241	0	1	-1	0	0	5.2	0	0	309.71167	62.685646	64863800		0
241	0	1	-1	0	0	4.2	0	0	277.18198	64.775168	64863800		0
241	0	1	-1	0	0	3.6	0	0	243.18675	62.685646	64863800		0
241	0	1	-1	0	0	4.8	0	0	302.93226	64.775168	64863800		0
501	0	0	-1	0.36458333	0	0	0	0	10.141077	139.67204	1456886.6		0
501	0	0	-1	0.36458333	0	0	0	0	17.084392	133.45802	1456886.6		0
501	0	0	-1	0.36458333	0	0	0	0	21.083836	152.66726	1456886.6		0
501	0	0	-1	0.36458333	0	0	0	0	24.908388	165.09371	1456886.6		0
501	0	0	-1	0.36458333	0	0	0	0	33.810858	190.62941	1456886.6		0
501	0	0	-1	0.36458333	0	0	0	0	45.146567	211.30563	1456886.6		0
501	0	0	-1	0.36458333	0	0	0	0	49.68677	229.80447	1456886.6		0
501	0	0	-1	0.36458333	0	0	0	0	43.971906	221.38394	1456886.6		0
501	0	0	-1	0.36458333	0	0	0	0	37.610095	204.59647	1456886.6		0
501	0	0	-1	0.36458333	0	0	0	0	31.493513	201.46323	1456886.6		0
501	0	0	-1	0.36458333	0	0	0	0	18.313879	162.21225	1456886.6		0
501	0	0	-1	0.36458333	0	0	0	0	11.274002	139.05698	1456886.6		0
1001	0	1	-1	0	0	4.2	0	0	263.18854	261.35125	283517930		0
1001	0	1	-1	0	0	4.6	0	0	252.94097	236.05919	283517930		0
1001	0	1	-1	0	0	4.6	0	0	280.04179	261.35125	283517930		0
1001	0	1	-1	0	0	5.4	0	0	303.58163	252.92056	283517930		0
1001	0	1	-1	0	0	7	0	0	380.87116	261.35125	283517930		0
1001	0	1	-1	0	0	6.7	0	0	356.40917	252.92056	283517930		0
1001	0	1	-1	0	0	6.9	0	0	376.67785	261.35125	283517930		0
1001	0	1	-1	0	0	6.2	0	0	347.30773	261.35125	283517930		0
1001	0	1	-1	0	0	5.2	0	0	295.44345	252.92056	283517930		0
1001	0	1	-1	0	0	4.2	0	0	263.18854	261.35125	283517930		0
1001	0	1	-1	0	0	3.6	0	0	230.19957	252.92056	283517930		0
1001	0	1	-1	0	0	4.8	0	0	288.46216	261.35125	283517930		0
1003	0	1	-1	0	0	4.2	0	0	288.4472	210.39152	228236020		0
1003	0	1	-1	0	0	4.6	0	0	276.44002	190.03105	228236020		0
1003	0	1	-1	0	0	4.6	0	0	306.05859	210.39152	228236020		0
1003	0	1	-1	0	0	5.4	0	0	330.12827	203.6047	228236020		0
1003	0	1	-1	0	0	7	0	0	410.82621	210.39152	228236020		0
1003	0	1	-1	0	0	6.7	0	0	384.96465	203.6047	228236020		0
1003	0	1	-1	0	0	6.9	0	0	406.48481	210.39152	228236020		0
1003	0	1	-1	0	0	6.2	0	0	376.04458	210.39152	228236020		0
1003	0	1	-1	0	0	5.2	0	0	321.65877	203.6047	228236020		0
1003	0	1	-1	0	0	4.2	0	0	288.4472	210.39152	228236020		0
1003	0	1	-1	0	0	3.6	0	0	253.4663	203.6047	228236020		0
1003	0	1	-1	0	0	4.8	0	0	314.84447	210.39152	228236020		0
1004	0	1	-1	43.333333	0	0	0	0	92.033902	80.160259	86959106		0
1004	0	1	-1	43.333333	0	0	0	0	83.127395	72.402815	86959106		0
1004	0	1	-1	43.333333	0	0	0	0	92.033902	80.160259	86959106		0
1004	0	1	-1	43.333333	0	0	0	0	89.065066	77.574444	86959106		0
1004	0	1	-1	43.333333	0	0	0	0	92.033902	80.160259	86959106		0
1004	0	1	-1	43.333333	0	0	0	0	89.065066	77.574444	86959106		0
1004	0	1	-1	43.333333	0	0	0	0	92.033902	80.160259	86959106		0
1004	0	1	-1	43.333333	0	0	0	0	92.033902	80.160259	86959106		0
1004	0	1	-1	43.333333	0	0	0	0	89.065066	77.574444	86959106		0
1004	0	1	-1	43.333333	0	0	0	0	92.033902	80.160259	86959106		0
1004	0	1	-1	43.333333	0	0	0	0	89.065066	77.574444	86959106		0
1004	0	1	-1	43.333333	0	0	0	0	92.033902	80.160259	86959106		0

Appendix C, Table C-6: TankESP Output Report for Tables C-4 and C-5
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	Flash Gas Molecular Wt	Floating roof Emission Factor	Floating Roof Kd	Floating Roof Kr	Floating Roof Sd	Floating roof standing storage loss factor	H/D Ratio	Heating cycle Ke	Heating cycle loss factor (vent setting)	Height of cone/slope bottom (ft)	Height of roof (ft)	Height of vapor space (ft)	Includes a bottom leg?	Includes a leak detector?	Initial WF	Is a vapor control device used?	Kb	Kc	Ke
167	0	316.61994	0	2.08	0.2	316.61994	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
167	0	336.21074	0	2.24	0.2	336.21074	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
167	0	336.21074	0	2.24	0.2	336.21074	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
167	0	375.20668	0	2.56	0.2	375.20668	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
167	0	452.63165	0	3.2	0.2	452.63165	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
167	0	438.1621	0	3.08	0.2	438.1621	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
167	0	447.81063	0	3.16	0.2	447.81063	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
167	0	414.00056	0	2.88	0.2	414.00056	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
167	0	365.4785	0	2.48	0.2	365.4785	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
167	0	316.61994	0	2.08	0.2	316.61994	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
167	0	287.09045	0	1.84	0.2	287.09045	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
167	0	345.98142	0	2.32	0.2	345.98142	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
170	0	319.47179	0	2.08	0.2	319.47179	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
170	0	339.08582	0	2.24	0.2	339.08582	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
170	0	339.08582	0	2.24	0.2	339.08582	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
170	0	378.1292	0	2.56	0.2	378.1292	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
170	0	455.65191	0	3.2	0.2	455.65191	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
170	0	441.16381	0	3.08	0.2	441.16381	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
170	0	450.82469	0	3.16	0.2	450.82469	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
170	0	416.97155	0	2.88	0.2	416.97155	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
170	0	368.38906	0	2.48	0.2	368.38906	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
170	0	319.47179	0	2.08	0.2	319.47179	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
170	0	289.90825	0	1.84	0.2	289.90825	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
170	0	348.86824	0	2.32	0.2	348.86824	0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0
204	0	0	0	0	0	0	0.53333333	-1	0	0	3.28125	29.09375	N	N	N	N	1	1	0
204	0	0	0	0	0	0	0.53333333	-1	0	0	3.28125	29.09375	N	N	N	N	1	1	0
204	0	0	0	0	0	0	0.53333333	-1	0	0	3.28125	29.09375	N	N	N	N	1	1	0
204	0	0	0	0	0	0	0.53333333	-1	0	0	3.28125	29.09375	N	N	N	N	1	1	0
204	0	0	0	0	0	0	0.53333333	-1	0	0	3.28125	29.09375	N	N	N	N	1	1	0
204	0	0	0	0	0	0	0.53333333	-1	0	0	3.28125	29.09375	N	N	N	N	1	1	0
204	0	0	0	0	0	0	0.53333333	-1	0	0	3.28125	29.09375	N	N	N	N	1	1	0
204	0	0	0	0	0	0	0.53333333	-1	0	0	3.28125	29.09375	N	N	N	N	1	1	0
204	0	0	0	0	0	0	0.53333333	-1	0	0	3.28125	29.09375	N	N	N	N	1	1	0
204	0	0	0	0	0	0	0.53333333	-1	0	0	3.28125	29.09375	N	N	N	N	1	1	0
204	0	0	0	0	0	0	0.53333333	-1	0	0	3.28125	29.09375	N	N	N	N	1	1	0
204	0	0	0	0	0	0	0.53333333	-1	0	0	3.28125	29.09375	N	N	N	N	1	1	0
205	0	0	0	0	0	0	0.4	-1	0	0	3.125	21.041667	N	N	N	N	1	1	0
205	0	0	0	0	0	0	0.4	-1	0	0	3.125	21.041667	N	N	N	N	1	1	0
205	0	0	0	0	0	0	0.4	-1	0	0	3.125	21.041667	N	N	N	N	1	1	0
205	0	0	0	0	0	0	0.4	-1	0	0	3.125	21.041667	N	N	N	N	1	1	0
205	0	0	0	0	0	0	0.4	-1	0	0	3.125	21.041667	N	N	N	N	1	1	0
205	0	0	0	0	0	0	0.4	-1	0	0	3.125	21.041667	N	N	N	N	1	1	0
205	0	0	0	0	0	0	0.4	-1	0	0	3.125	21.041667	N	N	N	N	1	1	0
205	0	0	0	0	0	0	0.4	-1	0	0	3.125	21.041667	N	N	N	N	1	1	0
205	0	0	0	0	0	0	0.4	-1	0	0	3.125	21.041667	N	N	N	N	1	1	0
205	0	0	0	0	0	0	0.4	-1	0	0	3.125	21.041667	N	N	N	N	1	1	0
205	0	0	0	0	0	0	0.4	-1	0	0	3.125	21.041667	N	N	N	N	1	1	0
205	0	0	0	0	0	0	0.4	-1	0	0	3.125	21.041667	N	N	N	N	1	1	0
241	0	342.15247	0	2.08	0.2	342.15247	0.35	-1	0	0	0	0	N	N	N	N	1	1	0
241	0	363.35996	0	2.24	0.2	363.35996	0.35	-1	0	0	0	0	N	N	N	N	1	1	0
241	0	363.35996	0	2.24	0.2	363.35996	0.35	-1	0	0	0	0	N	N	N	N	1	1	0
241	0	405.58585	0	2.56	0.2	405.58585	0.35	-1	0	0	0	0	N	N	N	N	1	1	0
241	0	489.46074	0	3.2	0.2	489.46074	0.35	-1	0	0	0	0	N	N	N	N	1	1	0
241	0	473.78264	0	3.08	0.2	473.78264	0.35	-1	0	0	0	0	N	N	N	N	1	1	0
241	0	484.2369	0	3.16	0.2	484.2369	0.35	-1	0	0	0	0	N	N	N	N	1	1	0
241	0	447.60608	0	2.88	0.2	447.60608	0.35	-1	0	0	0	0	N	N	N	N	1	1	0
241	0	395.05056	0	2.48	0.2	395.05056	0.35	-1	0	0	0	0	N	N	N	N	1	1	0
241	0	342.15247	0	2.08	0.2	342.15247	0.35	-1	0	0	0	0	N	N	N	N	1	1	0
241	0	310.19517	0	1.84	0.2	310.19517	0.35	-1	0	0	0	0	N	N	N	N	1	1	0
241	0	373.93852	0	2.32	0.2	373.93852	0.35	-1	0	0	0	0	N	N	N	N	1	1	0
501	0	0	0	0	0	0	0.42857143	-1	0	0	1.09375	7.8645833	N	N	N	N	1	1	0
501	0	0	0	0	0	0	0.42857143	-1	0	0	1.09375	7.8645833	N	N	N	N	1	1	0
501	0	0	0	0	0	0	0.42857143	-1	0	0	1.09375	7.8645833	N	N	N	N	1	1	0
501	0	0	0	0	0	0	0.42857143	-1	0	0	1.09375	7.8645833	N	N	N	N	1	1	0
501	0	0	0	0	0	0	0.42857143	-1	0	0	1.09375	7.8645833	N	N	N	N	1	1	0
501	0	0	0	0	0	0	0.42857143	-1	0	0	1.09375	7.8645833	N	N	N	N	1	1	0
501	0	0	0	0	0	0	0.42857143	-1	0	0	1.09375	7.8645833	N	N	N	N	1	1	0
501	0	0	0	0	0	0	0.42857143	-1	0	0	1.09375	7.8645833	N	N	N	N	1	1	0
501	0	0	0	0	0	0	0.42857143	-1	0	0	1.09375	7.8645833	N	N	N	N	1	1	0
501	0	0	0	0	0	0	0.42857143	-1	0	0	1.09375	7.8645833	N	N	N	N	1	1	0
501	0	0	0	0	0	0	0.42857143	-1	0	0	1.09375	7.8645833	N	N	N	N	1	1	0
501	0	0	0	0	0	0	0.42857143	-1	0	0	1.09375	7.8645833	N	N	N	N	1	1	0
1001	0	346.22281	0	2.08	0.2	346.22281	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1001	0	368.39316	0	2.24	0.2	368.39316	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1001	0	368.39316	0	2.24	0.2	368.39316	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1001	0	412.67165	0	2.56	0.2	412.67165	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1001	0	501.03354	0	3.2	0.2	501.03354	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1001	0	484.48242	0	3.08	0.2	484.48242	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1001	0	495.51727	0	3.16	0.2	495.51727	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1001	0	456.88107	0	2.88	0.2	456.88107	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1001	0	401.60907	0	2.48	0.2	401.60907	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1001	0	346.22281	0	2.08	0.2	346.22281	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1001	0	312.92024	0	1.84	0.2	312.92024	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1001	0	379.4701	0	2.32	0.2	379.4701	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1003	0	379.45042	0	2.08	0.2	379.45042	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1003	0	402.61809	0	2.24	0.2	402.61809	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1003	0	402.61809	0	2.24	0.2	402.61809	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1003	0	448.75764	0	2.56	0.2	448.75764	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1003	0	540.43921	0	3.2	0.2	540.43921	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1003	0	523.29911	0	3.08	0.2	523.29911	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1003	0	534.72812	0	3.16	0.2	534.72812	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1003	0	494.6842	0	2.88	0.2	494.6842	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1003	0	437.24469	0	2.48	0.2	437.24469	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1003	0	379.45042	0	2.08	0.2	379.45042	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1003	0	344.54772	0	1.84	0.2	344.54772	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1003	0	414.17585	0	2.32	0.2	414.17585	0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0
1004	0	121.07	0	0.4	0.2	121.07	0.36923077	-1	0	0	65	0	N	N	N	N	1	1	0
1004	0	121.07	0	0.4	0.2	121.07	0.36923077	-1	0	0	65	0	N	N	N	N	1	1	0
1004	0	121.07	0	0.4	0.2	121.07	0.36923077	-1	0	0	65	0	N	N	N	N	1	1	0
1004	0	121.07	0	0.4	0.2	121.07	0.36923077	-1	0	0	65	0	N	N	N	N	1	1	0
1004	0	121.07	0	0.4	0.2	121.07	0.36923077	-1	0	0	65	0	N	N	N	N	1	1	0
1004	0	121.07	0	0.4	0.2	121.07	0.36923077	-1	0	0	65	0	N	N	N	N	1	1	0
1004	0	121.07	0	0.4	0.2	121.07	0.36923077	-1	0	0	65	0	N	N	N	N	1	1	0
1004	0	121.07	0	0.4	0.2	121.07	0.36923077	-1	0	0	65	0	N	N	N	N	1	1	0
1004	0	121.07	0	0.4	0.2	121.07	0.36923077	-1	0	0	65	0	N	N	N	N	1	1	0
1004	0	121.07	0	0.4	0.2	121.07	0.36923077	-1	0	0	65	0	N	N	N	N	1	1	0
1004	0	121.07	0	0.4	0.2	121.07	0.36923077	-1	0	0	65	0	N	N	N	N	1	1	0
1004	0	121.07	0	0.4	0.2	121.07	0.36923077	-1	0	0	65	0	N	N	N	N	1	1	0

Appendix C, Table C-6: TankESP Output Report for Tables C-4 and C-5
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	AP use skirted code	AP use controlled code	Kc	Kn	Ks	Loss from incoming vapors (lbs)	Loss from ambient vapors (lbs)	Liquid bulk temperature (degF)	Max. Ambient Temp. (degF)	Max. Liquid Surface Temp. (degF)	Max. TVP (psia)	Met. Data City	Met. Data State	Min. Ambient Temp. (degF)	Min. Liquid Surface Temp. (degF)	Min. TVP (psia)	Net working height (ft)	Nominal operating pressure (psig)
167	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
167	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
167	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
167	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
167	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
167	0	26.35141	0	1	1	0	0	65.97	76.49	73.837992	6.0315257	Rodeo	CA	55.45	73.837992	6.0315257	46	0
167	0	26.638062	0	1	1	0	0	67.94	78.6	75.927061	6.0315257	Rodeo	CA	57.28	75.927061	6.0315257	46	0
167	0	25.626359	0	1	1	0	0	67.01	77.34	73.900368	6.0315257	Rodeo	CA	56.68	73.900368	6.0315257	46	0
167	0	24.135865	0	1	1	0	0	65.925	76.52	71.361466	6.0315257	Rodeo	CA	55.33	71.361466	6.0315257	46	0
167	0	22.580501	0	1	1	0	0	64.625	74.17	68.892704	6.0315257	Rodeo	CA	55.08	68.892704	6.0315257	46	0
167	0	21.608414	0	1	1	0	0	58.555	66.57	60.820455	6.0315257	Rodeo	CA	50.54	60.820455	6.0315257	46	0
167	0	23.522399	0	1	1	0	0	51.525	56.85	53.862524	6.0315257	Rodeo	CA	46.2	53.862524	6.0315257	46	0
170	0	22.580501	0	1	1	0	0	51.905	57.01	53.813246	4.513171	Rodeo	CA	46.8	53.813246	4.513171	46	0
170	0	23.211478	0	1	1	0	0	53.655	62.47	56.230663	4.513171	Rodeo	CA	44.84	56.230663	4.513171	46	0
170	0	23.211478	0	1	1	0	0	53.84	61.35	58.464913	4.513171	Rodeo	CA	46.33	58.464913	4.513171	46	0
170	0	24.438674	0	1	1	0	0	57.695	65.61	62.987329	4.513171	Rodeo	CA	49.78	62.987329	4.513171	46	0
170	0	26.780701	0	1	1	0	0	60.79	68.52	68.394785	4.513171	Rodeo	CA	53.06	68.394785	4.513171	46	0
170	0	26.35141	0	1	1	0	0	65.97	76.49	73.837992	4.513171	Rodeo	CA	55.45	73.837992	4.513171	46	0
170	0	26.638062	0	1	1	0	0	67.94	78.6	75.927061	4.513171	Rodeo	CA	57.28	75.927061	4.513171	46	0
170	0	25.626359	0	1	1	0	0	67.01	77.34	73.900368	4.513171	Rodeo	CA	56.68	73.900368	4.513171	46	0
170	0	24.135865	0	1	1	0	0	65.925	76.52	71.361466	4.513171	Rodeo	CA	55.33	71.361466	4.513171	46	0
170	0	22.580501	0	1	1	0	0	64.625	74.17	68.892704	4.513171	Rodeo	CA	55.08	68.892704	4.513171	46	0
170	0	21.608414	0	1	1	0	0	58.555	66.57	60.820455	4.513171	Rodeo	CA	50.54	60.820455	4.513171	46	0
170	0	23.522399	0	1	1	0	0	51.525	56.85	53.862524	4.513171	Rodeo	CA	46.2	53.862524	4.513171	46	0
204	0	0	0	1	0	0	0	51.905	57.01	55.464687	1.4219085	Rodeo	CA	46.8	50.304747	1.4219085	54	0
204	0	0	0	1	0	0	0	53.655	62.47	59.171477	1.4219085	Rodeo	CA	44.84	50.783277	1.4219085	54	0
204	0	0	0	1	0	0	0	53.84	61.35	60.668956	1.4219085	Rodeo	CA	46.33	51.760018	1.4219085	54	0
204	0	0	0	1	0	0	0	57.695	65.61	65.258397	1.4219085	Rodeo	CA	49.78	55.565897	1.4219085	54	0
204	0	0	0	1	0	0	0	60.79	68.52	70.310673	1.4219085	Rodeo	CA	53.06	59.078108	1.4219085	54	0
204	0	0	0	1	0	0	0	65.97	76.49	76.753116	1.4219085	Rodeo	CA	55.45	63.265931	1.4219085	54	0
204	0	0	0	1	0	0	0	67.94	78.6	78.879199	1.4219085	Rodeo	CA	57.28	65.202111	1.4219085	54	0
204	0	0	0	1	0	0	0	67.01	77.34	76.866453	1.4219085	Rodeo	CA	56.68	64.228746	1.4219085	54	0
204	0	0	0	1	0	0	0	65.925	76.52	74.605853	1.4219085	Rodeo	CA	55.33	62.826444	1.4219085	54	0
204	0	0	0	1	0	0	0	64.625	74.17	71.893684	1.4219085	Rodeo	CA	55.08	61.738499	1.4219085	54	0
204	0	0	0	1	0	0	0	58.555	66.57	63.503858	1.4219085	Rodeo	CA	50.54	55.932367	1.4219085	54	0
204	0	0	0	1	0	0	0	51.525	56.85	55.542098	1.4219085	Rodeo	CA	46.2	49.908129	1.4219085	54	0
205	0	0	0	1	0	0	0	51.905	57.01	55.451936	5.4194807	Rodeo	CA	46.8	50.381127	5.4194807	38	0
205	0	0	0	1	0	0	0	53.655	62.47	59.127836	5.4194807	Rodeo	CA	44.84	50.9128	5.4194807	38	0
205	0	0	0	1	0	0	0	53.84	61.35	60.704831	5.4194807	Rodeo	CA	46.33	51.878356	5.4194807	38	0
205	0	0	0	1	0	0	0	57.695	65.61	65.308771	5.4194807	Rodeo	CA	49.78	55.69199	5.4194807	38	0
205	0	0	0	1	0	0	0	60.79	68.52	70.433093	5.4194807	Rodeo	CA	53.06	59.209262	5.4194807	38	0
205	0	0	0	1	0	0	0	65.97	76.49	76.845132	5.4194807	Rodeo	CA	55.45	63.436265	5.4194807	38	0
205	0	0	0	1	0	0	0	67.94	78.6	78.972871	5.4194807	Rodeo	CA	57.28	65.37476	5.4194807	38	0
205	0	0	0	1	0	0	0	67.01	77.34	76.931693	5.4194807	Rodeo	CA	56.68	64.393258	5.4194807	38	0
205	0	0	0	1	0	0	0	65.925	76.52	74.623754	5.4194807	Rodeo	CA	55.33	62.989816	5.4194807	38	0
205	0	0	0	1	0	0	0	64.625	74.17	71.890876	5.4194807	Rodeo	CA	55.08	61.88361	5.4194807	38	0
205	0	0	0	1	0	0	0	58.555	66.57	63.46188	5.4194807	Rodeo	CA	50.54	56.049884	5.4194807	38	0
205	0	0	0	1	0	0	0	51.525	56.85	55.539228	5.4194807	Rodeo	CA	46.2	49.988941	5.4194807	38	0
241	0	22.580501	0	1	1	0	0	51.905	57.01	53.846115	6.5077905	Rodeo	CA	46.8	53.846115	6.5077905	40	0
241	0	23.211478	0	1	1	0	0	53.655	62.47	56.275027	6.5077905	Rodeo	CA	44.84	56.275027	6.5077905	40	0
241	0	23.211478	0	1	1	0	0	53.84	61.35	58.544573	6.5077905	Rodeo	CA	46.33	58.544573	6.5077905	40	0
241	0	24.438674	0	1	1	0	0	57.695	65.61	63.078485	6.5077905	Rodeo	CA	49.78	63.078485	6.5077905	40	0
241	0	26.780701	0	1	1	0	0	60.79	68.52	68.525772	6.5077905	Rodeo	CA	53.06	68.525772	6.5077905	40	0
241	0	26.35141	0	1	1	0	0	65.97	76.49	73.973512	6.5077905	Rodeo	CA	55.45	73.973512	6.5077905	40	0
241	0	26.638062	0	1	1	0	0	67.94	78.6	76.064633	6.5077905	Rodeo	CA	57.28	76.064633	6.5077905	40	0
241	0	25.626359	0	1	1	0	0	67.01	77.34	74.019049	6.5077905	Rodeo	CA	56.68	74.019049	6.5077905	40	0
241	0	24.135865	0	1	1	0	0	65.925	76.52	71.455105	6.5077905	Rodeo	CA	55.33	71.455105	6.5077905	40	0
241	0	22.580501	0	1	1	0	0	64.625	74.17	68.966212	6.5077905	Rodeo	CA	55.08	68.966212	6.5077905	40	0
241	0	21.608414	0	1	1	0	0	58.555	66.57	60.859476	6.5077905	Rodeo	CA	50.54	60.859476	6.5077905	40	0
241	0	23.522399	0	1	1	0	0	51.525	56.85	53.902786	6.5077905	Rodeo	CA	46.2	53.902786	6.5077905	40	0
501	0	0	0	1	1	0	0	51.905	57.01	55.45489	0.15769467	Rodeo	CA	46.8	50.363433	0.13603293	13	0
501	0	0	0	1	1	0	0	53.655	62.47	59.137946	0.17516741	Rodeo	CA	44.84	50.882795	0.13811751	13	0
501	0	0	0	1	1	0	0	53.84	61.35	60.69652	0.18305049	Rodeo	CA	46.33	51.850942	0.14207733	13	0
501	0	0	0	1	1	0	0	57.695	65.61	65.297101	0.20813247	Rodeo	CA	49.78	55.66278	0.15863913	13	0
501	0	0	0	1	1	0	0	60.79	68.52	70.404733	0.23939848	Rodeo	CA	53.06	59.178879	0.17537063	13	0
501	0	0	0	1	1	0	0	65.97	76.49	76.823816	0.28435977	Rodeo	CA	55.45	63.396806	0.19743452	13	0
501	0	0	0	1	1	0	0	67.94	78.6	78.951171	0.30077865	Rodeo	CA	57.28	65.334764	0.20834946	13	0
501	0	0	0	1	1	0	0	67.01	77.34	76.91658	0.28505931	Rodeo	CA	56.68	64.355148	0.20276877	13	0
501	0	0	0	1	1	0	0	65.925	76.52	74.619607	0.26816606	Rodeo	CA	55.33	62.951969	0.19499994	13	0
501	0	0	0	1	1	0	0	64.625	74.17	71.891526	0.24922691	Rodeo	CA	55.08	61.849994	0.18908013	13	0
501	0	0	0	1	1	0	0	58.555	66.57	63.471605	0.19784646	Rodeo	CA	50.54	56.02266	0.16028567	13	0
501	0	0	0	1	1	0	0	51.525	56.85	55.539893	0.15808026	Rodeo	CA	46.2	49.97022	0.13447286	13	0
1001	0	22.580501	0	1	1	0	0	51.905	57.01	53.838021	6.202795	Rodeo	CA	46.8	53.838021	6.202795	46	0
1001	0	23.211478	0	1	1	0	0	53.655	62.47	56.264102	6.202795	Rodeo	CA	44.84	56.264102	6.202795	46	0
1001	0	23.211478	0	1	1	0	0	53.84	61.35	58.524957	6.202795	Rodeo	CA	46.33	58.524957	6.202795	46	0
1001	0	24.438674	0	1	1	0	0	57.695	65.61	63.056038	6.202795	Rodeo	CA	49.78	63.056038	6.202795	46	0
1001	0	26.780701	0	1	1	0	0	60.79	68.52	68.493516	6.202795	Rodeo	CA	53.06	68.493516	6.202795	46	0
1001	0	26.35141	0	1	1	0	0	65.97	76.49	73.94014	6.202795	Rodeo	CA	55.45	73.94014	6.202795	46	0
1001	0	26.638062	0	1	1	0	0	67.94	78.6	76.030755	6.202795	Rodeo	CA	57.28	76.030755	6.202795	46	0
1001	0	25.626359	0	1	1	0	0	67.01	77.34	73.989824	6.202795	Rodeo	CA	56.68	73.989824	6.202795	46	0
1001	0	24.135865	0	1	1	0	0	65.925	76.52	71.432046	6.202795	Rodeo	CA	55.33	71.432046	6.202795	46	0
1001	0	22.580501	0	1	1	0	0	64.625	74.17	68.94811	6.202795	Rodeo	CA	55.08	68.94811	6.202795	46	0
1001	0	21.608414	0	1	1	0	0	58.555	66.57	60.849867	6.202795	Rodeo	CA	50.54	60.849867	6.202795	46	0
1001	0	23.522399	0	1	1	0	0	51.525	56.85	53.892871	6.202795	Rodeo	CA	46.2	53.892871	6.202795	46	0
1003	0	22.580501	0	1	1	0	0	51.905	57.01	53.838021	6.202795	Rodeo	CA	46.8	53.838021	6.202795	46	0
1003	0	23.211478	0	1	1	0	0	53.655	62.47	56.264102	6.202795	Rodeo	CA	44.84	56.264102	6.202795	46	0
1003	0	23.211478	0	1	1	0	0	53.84	61.35	58.524957	6.202795	Rodeo	CA	46.33	58.524957	6.202795	46	0
1003	0	24.438674	0	1	1	0	0	57.695	65.61	63.056038	6.202795	Rodeo	CA	49.78	63.056038	6.202795	46	0
1003	0	26.780701	0	1	1	0	0	60.79	68.52	68.493516	6.202795	Rodeo	CA	53.06	68.493516	6.202795	46	0
1003	0	26.35141	0	1	1	0	0	65.97	76.49	73.94014	6.202795	Rodeo	CA	55.45	73.94014	6.202795	46	0
1003	0	26.638062	0	1	1	0	0	67.94	78.6	76.030755	6.202795	Rodeo	CA	57.28	76.030755	6.202795	46	0
1003	0	25.626359	0	1	1	0	0	67.01	77.34	73.989824	6.202795	Rodeo	CA	56.68	73.989824	6.202795	46	0
1003	0	24.135865	0	1	1	0	0	65.925	76.52	71.432046	6.202795	Rodeo	CA	55.33	71.432046	6.202795	46	0
1003	0	22.580501	0	1	1	0	0	64.625	74.17	68.94811	6.202795	Rodeo	CA	55.08	68.94811	6.202795	46	0
1003	0	21.608414	0	1	1	0	0	58.555	66.57	60.849867	6.202795	Rodeo	CA	50.54	60.849867	6.202795	46	0
1003	0	23.522399	0	1	1	0	0	51.525	56.85	53.892871	6.202795	Rodeo	CA	46.2	53.892871	6.202795	46	0
1004	0	14	0	1	1	0	0	51.905	57.01	52.880637	6.202795	Rodeo	CA	46.8	52.880637	6.202795	46	0
1004	0	14	0	1	1	0	0	53.655	62.47	54.97187	6.202795	Rodeo	CA	44.84	54.97187	6.202795	46	0
1004	0	14	0	1	1	0	0	53.84	61.35	56.204599	6.202795	Rodeo	CA	46.33	56.204599	6.202795	46	0
1004	0	14	0	1	1	0	0	57.695	65.61	60.400832	6.202795	Rodeo	CA	49.78	60.400832	6.202795	46	0
1004	0	14	0	1	1	0	0	60.79	68.52	64.678131	6.202795	Rodeo	CA	53.06	64.678131	6.202795	46	0
1004	0	14	0	1	1	0	0	65.97	76.49	69.992702	6.202795	Rodeo	CA	55.45	69.992702	6.202795	46	0
1004	0	14	0	1	1	0	0	67.94	78.6	72.023579	6.202795	Rodeo	CA	57.28	72.023579	6.202795	46	0
1004	0	14	0	1	1	0	0	67.01	77.34	70.532868	6.202795	Rodeo	CA	56.68	70.532868	6.202795	46	0
1004	0	14	0	1	1	0	0	65.925	76.52	68.704525	6.202795	Rodeo	CA	55.33	68.704525	6.202795	46	0
1004	0	14	0	1	1	0	0	64.625	74.17	66.806967	6.202795	Rodeo	CA	55.08	66.806967	6.202795	46	0
1004	0	14	0	1	1	0	0	58.555	66.57	59.713269	6.202795	Rodeo	CA	50.54	59.713269	6.202795	46	0
1004	0	14	0	1	1	0	0	51.525	56.85	52.720116	6.202795	Rodeo	CA	46.2	52.720116	6.202795	46	0

Appendix C, Table C-6: TankESP Output Report for Tables C-4 and C-5
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	Non Routine Emissions (lbs)	Number of Columns	Number of Days	Number of Days Cleaning	Number of turnovers	Stock Product	Report End Date	Report Start Date	Resident loss limit (lbs)	Rim seal Emission Factor	Rim Seal Loss (lbs)	Rim Seal Loss Factor Exponent	Rim Seal Loss Factor Kra	Rim Seal Loss Factor Krb	Roof landing loss (lbs)	Roof landing loss limit (lbs)	Roof Reflectivity (alpha)	Roof Type
167	0	0	31	0	130.72127	Light Hydroc	2/1/2021	1/1/2021	-1	228.8	157.51389	1	0.4	0.4	0	0	0.25	EFRT
167	0	0	28	0	130.72127	Light Hydroc	3/1/2021	2/1/2021	-1	246.4	153.21451	1	0.4	0.4	0	0	0.25	EFRT
167	0	0	31	0	130.72127	Light Hydroc	4/1/2021	3/1/2021	-1	246.4	169.63035	1	0.4	0.4	0	0	0.25	EFRT
167	0	0	30	0	130.72127	Light Hydroc	5/1/2021	4/1/2021	-1	281.6	187.6096	1	0.4	0.4	0	0	0.25	EFRT
167	0	0	31	0	130.72127	Light Hydroc	6/1/2021	5/1/2021	-1	352	242.32907	1	0.4	0.4	0	0	0.25	EFRT
167	0	0	30	0	130.72127	Light Hydroc	7/1/2021	6/1/2021	-1	338.8	225.7178	1	0.4	0.4	0	0	0.25	EFRT
167	0	0	31	0	130.72127	Light Hydroc	8/1/2021	7/1/2021	-1	347.6	239.29995	1	0.4	0.4	0	0	0.25	EFRT
167	0	0	31	0	130.72127	Light Hydroc	9/1/2021	8/1/2021	-1	316.8	218.09616	1	0.4	0.4	0	0	0.25	EFRT
167	0	0	30	0	130.72127	Light Hydroc	10/1/2021	9/1/2021	-1	272.8	181.7468	1	0.4	0.4	0	0	0.25	EFRT
167	0	0	31	0	130.72127	Light Hydroc	11/1/2021	10/1/2021	-1	228.8	157.51389	1	0.4	0.4	0	0	0.25	EFRT
167	0	0	30	0	130.72127	Light Hydroc	12/1/2021	11/1/2021	-1	202.4	134.8444	1	0.4	0.4	0	0	0.25	EFRT
167	0	0	31	0	130.72127	Light Hydroc	1/1/2022	12/1/2021	-1	255.2	175.68857	1	0.4	0.4	0	0	0.25	EFRT
170	0	0	31	0	140.23757	Reformate-T	2/1/2021	1/1/2021	-1	228.8	116.8206	1	0.4	0.4	0	0	0.25	EFRT
170	0	0	28	0	140.23757	Reformate-T	3/1/2021	2/1/2021	-1	246.4	113.63195	1	0.4	0.4	0	0	0.25	EFRT
170	0	0	31	0	140.23757	Reformate-T	4/1/2021	3/1/2021	-1	246.4	125.8068	1	0.4	0.4	0	0	0.25	EFRT
170	0	0	30	0	140.23757	Reformate-T	5/1/2021	4/1/2021	-1	281.6	139.14116	1	0.4	0.4	0	0	0.25	EFRT
170	0	0	31	0	140.23757	Reformate-T	6/1/2021	5/1/2021	-1	352	179.724	1	0.4	0.4	0	0	0.25	EFRT
170	0	0	30	0	140.23757	Reformate-T	7/1/2021	6/1/2021	-1	338.8	167.40421	1	0.4	0.4	0	0	0.25	EFRT
170	0	0	31	0	140.23757	Reformate-T	8/1/2021	7/1/2021	-1	347.6	177.47745	1	0.4	0.4	0	0	0.25	EFRT
170	0	0	31	0	140.23757	Reformate-T	9/1/2021	8/1/2021	-1	316.8	161.7516	1	0.4	0.4	0	0	0.25	EFRT
170	0	0	30	0	140.23757	Reformate-T	10/1/2021	9/1/2021	-1	272.8	134.793	1	0.4	0.4	0	0	0.25	EFRT
170	0	0	31	0	140.23757	Reformate-T	11/1/2021	10/1/2021	-1	228.8	116.8206	1	0.4	0.4	0	0	0.25	EFRT
170	0	0	30	0	140.23757	Reformate-T	12/1/2021	11/1/2021	-1	202.4	100.00771	1	0.4	0.4	0	0	0.25	EFRT
170	0	0	31	0	140.23757	Reformate-T	1/1/2022	12/1/2021	-1	255.2	130.2999	1	0.4	0.4	0	0	0.25	EFRT
204	0	0	31	0	154.018	Light Coker (	2/1/2021	1/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
204	0	0	28	0	154.018	Light Coker (	3/1/2021	2/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
204	0	0	31	0	154.018	Light Coker (	4/1/2021	3/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
204	0	0	30	0	154.018	Light Coker (	5/1/2021	4/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
204	0	0	31	0	154.018	Light Coker (	6/1/2021	5/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
204	0	0	30	0	154.018	Light Coker (	7/1/2021	6/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
204	0	0	31	0	154.018	Light Coker (	8/1/2021	7/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
204	0	0	31	0	154.018	Light Coker (	9/1/2021	8/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
204	0	0	30	0	154.018	Light Coker (	10/1/2021	9/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
204	0	0	31	0	154.018	Light Coker (	11/1/2021	10/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
204	0	0	30	0	154.018	Light Coker (	12/1/2021	11/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
204	0	0	31	0	154.018	Light Coker (	1/1/2022	12/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
205	0	0	31	0	385.22001	Naphtha-TK2	2/1/2021	1/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
205	0	0	28	0	385.22001	Naphtha-TK2	3/1/2021	2/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
205	0	0	31	0	385.22001	Naphtha-TK2	4/1/2021	3/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
205	0	0	30	0	385.22001	Naphtha-TK2	5/1/2021	4/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
205	0	0	31	0	385.22001	Naphtha-TK2	6/1/2021	5/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
205	0	0	30	0	385.22001	Naphtha-TK2	7/1/2021	6/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
205	0	0	31	0	385.22001	Naphtha-TK2	8/1/2021	7/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
205	0	0	31	0	385.22001	Naphtha-TK2	9/1/2021	8/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
205	0	0	30	0	385.22001	Naphtha-TK2	10/1/2021	9/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
205	0	0	31	0	385.22001	Naphtha-TK2	11/1/2021	10/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
205	0	0	30	0	385.22001	Naphtha-TK2	12/1/2021	11/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
205	0	0	31	0	385.22001	Naphtha-TK2	1/1/2022	12/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
241	0	0	31	0	145.38048	Gasoline-TK2	2/1/2021	1/1/2021	-1	249.6	202.20407	1	0.4	0.4	0	0	0.25	EFRT
241	0	0	28	0	145.38048	Gasoline-TK2	3/1/2021	2/1/2021	-1	268.8	196.68485	1	0.4	0.4	0	0	0.25	EFRT
241	0	0	31	0	145.38048	Gasoline-TK2	4/1/2021	3/1/2021	-1	268.8	217.75823	1	0.4	0.4	0	0	0.25	EFRT
241	0	0	30	0	145.38048	Gasoline-TK2	5/1/2021	4/1/2021	-1	307.2	240.8386	1	0.4	0.4	0	0	0.25	EFRT
241	0	0	31	0	145.38048	Gasoline-TK2	6/1/2021	5/1/2021	-1	384	311.08319	1	0.4	0.4	0	0	0.25	EFRT
241	0	0	30	0	145.38048	Gasoline-TK2	7/1/2021	6/1/2021	-1	369.6	289.75894	1	0.4	0.4	0	0	0.25	EFRT
241	0	0	31	0	145.38048	Gasoline-TK2	8/1/2021	7/1/2021	-1	379.2	307.19465	1	0.4	0.4	0	0	0.25	EFRT
241	0	0	31	0	145.38048	Gasoline-TK2	9/1/2021	8/1/2021	-1	345.6	279.97487	1	0.4	0.4	0	0	0.25	EFRT
241	0	0	30	0	145.38048	Gasoline-TK2	10/1/2021	9/1/2021	-1	297.6	233.31239	1	0.4	0.4	0	0	0.25	EFRT
241	0	0	31	0	145.38048	Gasoline-TK2	11/1/2021	10/1/2021	-1	249.6	202.20407	1	0.4	0.4	0	0	0.25	EFRT
241	0	0	30	0	145.38048	Gasoline-TK2	12/1/2021	11/1/2021	-1	220.8	173.10274	1	0.4	0.4	0	0	0.25	EFRT
241	0	0	31	0	145.38048	Gasoline-TK2	1/1/2022	12/1/2021	-1	278.4	225.53531	1	0.4	0.4	0	0	0.25	EFRT
501	0	0	31	0	116.48136	Water Treat	2/1/2021	1/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
501	0	0	28	0	116.48136	Water Treat	3/1/2021	2/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
501	0	0	31	0	116.48136	Water Treat	4/1/2021	3/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
501	0	0	30	0	116.48136	Water Treat	5/1/2021	4/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
501	0	0	31	0	116.48136	Water Treat	6/1/2021	5/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
501	0	0	30	0	116.48136	Water Treat	7/1/2021	6/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
501	0	0	31	0	116.48136	Water Treat	8/1/2021	7/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
501	0	0	31	0	116.48136	Water Treat	9/1/2021	8/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
501	0	0	30	0	116.48136	Water Treat	10/1/2021	9/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
501	0	0	31	0	116.48136	Water Treat	11/1/2021	10/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
501	0	0	30	0	116.48136	Water Treat	12/1/2021	11/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
501	0	0	31	0	116.48136	Water Treat	1/1/2022	12/1/2021	-1	0	0	0	0	0	0	0	0.25	FixedRoof
1001	0	0	31	0	464.35071	Gasoline-TK1	2/1/2021	1/1/2021	-1	270.4	205.55024	1	0.4	0.4	0	0	0.25	EFRT
1001	0	0	28	0	464.35071	Gasoline-TK1	3/1/2021	2/1/2021	-1	291.2	199.93968	1	0.4	0.4	0	0	0.25	EFRT
1001	0	0	31	0	464.35071	Gasoline-TK1	4/1/2021	3/1/2021	-1	291.2	221.36179	1	0.4	0.4	0	0	0.25	EFRT
1001	0	0	30	0	464.35071	Gasoline-TK1	5/1/2021	4/1/2021	-1	332.8	244.8241	1	0.4	0.4	0	0	0.25	EFRT
1001	0	0	31	0	464.35071	Gasoline-TK1	6/1/2021	5/1/2021	-1	416	316.23113	1	0.4	0.4	0	0	0.25	EFRT
1001	0	0	30	0	464.35071	Gasoline-TK1	7/1/2021	6/1/2021	-1	400.4	294.554	1	0.4	0.4	0	0	0.25	EFRT
1001	0	0	31	0	464.35071	Gasoline-TK1	8/1/2021	7/1/2021	-1	410.8	312.27824	1	0.4	0.4	0	0	0.25	EFRT
1001	0	0	31	0	464.35071	Gasoline-TK1	9/1/2021	8/1/2021	-1	374.4	284.60802	1	0.4	0.4	0	0	0.25	EFRT
1001	0	0	30	0	464.35071	Gasoline-TK1	10/1/2021	9/1/2021	-1	322.4	237.17335	1	0.4	0.4	0	0	0.25	EFRT
1001	0	0	31	0	464.35071	Gasoline-TK1	11/1/2021	10/1/2021	-1	270.4	205.55024	1	0.4	0.4	0	0	0.25	EFRT
1001	0	0	30	0	464.35071	Gasoline-TK1	12/1/2021	11/1/2021	-1	239.2	175.96732	1	0.4	0.4	0	0	0.25	EFRT
1001	0	0	31	0	464.35071	Gasoline-TK1	1/1/2022	12/1/2021	-1	301.6	229.26757	1	0.4	0.4	0	0	0.25	EFRT
1003	0	0	31	0	373.80901	Gasoline-TK1	2/1/2021	1/1/2021	-1	270.4	205.55024	1	0.4	0.4	0	0	0.25	EFRT
1003	0	0	28	0	373.80901	Gasoline-TK1	3/1/2021	2/1/2021	-1	291.2	199.93968	1	0.4	0.4	0	0	0.25	EFRT
1003	0	0	31	0	373.80901	Gasoline-TK1	4/1/2021	3/1/2021	-1	291.2	221.36179	1	0.4	0.4	0	0	0.25	EFRT
1003	0	0	30	0	373.80901	Gasoline-TK1	5/1/2021	4/1/2021	-1	332.8	244.8241	1	0.4	0.4	0	0	0.25	EFRT
1003	0	0	31	0	373.80901	Gasoline-TK1	6/1/2021	5/1/2021	-1	416	316.23113	1	0.4	0.4	0	0	0.25	EFRT
1003	0	0	30	0	373.80901	Gasoline-TK1	7/1/2021	6/1/2021	-1	400.4	294.554	1	0.4	0.4	0	0	0.25	EFRT
1003	0	0	31	0	373.80901	Gasoline-TK1	8/1/2021	7/1/2021	-1	410.8	312.27824	1	0.4	0.4	0	0	0.25	EFRT
1003	0	0	31	0	373.80901	Gasoline-TK1	9/1/2021	8/1/2021	-1	374.4	284.60802	1	0.4	0.4	0	0	0.25	EFRT
1003	0	0	30	0	373.80901	Gasoline-TK1	10/1/2021	9/1/2021	-1	322.4	237.17335	1	0.4	0.4	0	0	0.25	EFRT
1003	0	0	31	0	373.80901	Gasoline-TK1	11/1/2021	10/1/2021	-1	270.4	205.55024	1	0.4	0.4	0	0	0.25	EFRT
1003	0	0	30	0	373.80901	Gasoline-TK1	12/1/2021	11/1/2021	-1	239.2	175.96732	1	0.4	0.4	0	0	0.25	EFRT
1003	0	0	31	0	373.80901	Gasoline-TK1	1/1/2022	12/1/2021	-1	301.6	229.26757	1	0.4	0.4	0	0	0.25	EFRT
1004	0	0	31	0	142.42317	Gasoline-TK1	2/1/2021	1/1/2021	-1	52	39.528891	1	0.4	0.4	0	0	0.25	IFRT
1004	0	0	28	0	142.42317	Gasoline-TK1	3/1/2021	2/1/2021	-1	52	35.703515	1	0.4	0.4	0	0	0.25	IFRT
1004	0	0	31	0	142.42317	Gasoline-TK1	4/1/2021	3/1/2021	-1	52	39.528891	1	0.4	0.4	0	0	0.25	IFRT
1004	0	0	30	0	142.42317	Gasoline-TK1	5/1/2021	4/1/2021	-1	52	38.253766	1	0.4	0.4	0	0	0.25	IFRT
1004	0	0	31	0	142.42317	Gasoline-TK1	6/1/2021	5/1/2021	-1	52	39.528891	1	0.4	0.4	0	0	0.25	IFRT
1004	0	0	30	0	142.42317	Gasoline-TK1	7/1/2021	6/1/2021	-1	52	38.253766	1	0.4	0.4	0	0	0.25	IFRT
1004	0	0	31	0	142.42317	Gasoline-TK1	8/1/2021	7/1/2021	-1	52	39.528891	1	0.4	0.4	0	0	0.25	IFRT
1004	0	0	31	0	142.42317	Gasoline-TK1	9/1/2021	8/1/2021	-1	52	39.528891	1	0.4	0.4	0	0	0.25	IFRT
1004	0	0	30	0	142.42317	Gasoline-TK1	10/1/2021	9/1/2021	-1	52	38.253766	1	0.4	0.4	0	0	0.25	IFRT
1004	0	0	31	0	142.42317	Gasoline-TK1	11/1/2021	10/1/2021	-1	52	39.528891	1	0.4	0.4	0	0	0.25	IFRT
1004	0	0	30	0	142.42317	Gasoline-TK1	12/1/2021	11/1/2021	-1	52	38.253766	1	0.4	0.4	0	0	0.25	IFRT
1004	0	0	31	0	142.42317	Gasoline-TK1	1/1/2022	12/1/2021	-1	52	39.528891	1	0.4	0.4	0	0	0.25	IFRT

Appendix C, Table C-6: TankESP Output Report for Tables C-4 and C-5
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

														Throughput (bbl)	Total estimated emissions (lbs)		
Tank ID	Routine Emissions (lbs)	RVP	Saturation Factor (Sa)	Seam Emission Factor	Shell Reflectivity (alpha)	Slotted pole Emission Factor	Slotted Pole Loss (lbs)	Solar insolation	Standing loss (w/out control) (lbs)	Tank base area (ft2)	Tank Diameter (ft)	Tank Height (ft)	Tank Type	Throughput (bbl)	Total estimated emissions (lbs)	Unslotted pole Emission Factor	Unslotted Pole Loss (lbs)
167	284.67396		0	0	0.25	0	0	609	217.9722	9503.3178	110	48	EFRT	864521.46	284.67396	22.580501	15.545204
167	269.30666		0	0	0.25	0	0	822	209.05991	9503.3178	110	48	EFRT	780858.09	269.30666	23.211478	14.433178
167	298.16095		0	0	0.25	0	0	1476	231.45919	9503.3178	110	48	EFRT	864521.46	298.16095	23.211478	15.97959
167	314.52301		0	0	0.25	0	0	1689	249.97292	9503.3178	110	48	EFRT	836633.67	314.52301	24.438674	16.281711
167	378.30916		0	0	0.25	0	0	2427	311.6074	9503.3178	110	48	EFRT	864521.46	378.30916	26.780701	18.436768
167	356.46563		0	0	0.25	0	0	2511	291.91554	9503.3178	110	48	EFRT	836633.67	356.46563	26.35141	17.556028
167	374.9902		0	0	0.25	0	0	2549	308.28844	9503.3178	110	48	EFRT	864521.46	374.9902	26.638062	18.33857
167	351.71417		0	0	0.25	0	0	2199	285.01241	9503.3178	110	48	EFRT	864521.46	351.71417	25.626359	17.642078
167	308.04184		0	0	0.25	0	0	1735	243.49174	9503.3178	110	48	EFRT	836633.67	308.04184	24.135865	16.079971
167	284.67396		0	0	0.25	0	0	1362	217.9722	9503.3178	110	48	EFRT	864521.46	284.67396	22.580501	15.545204
167	255.81758		0	0	0.25	0	0	723	191.26749	9503.3178	110	48	EFRT	836633.67	255.81758	21.608414	14.396115
167	304.88742		0	0	0.25	0	0	746	238.18566	9503.3178	110	48	EFRT	864521.46	304.88742	23.522399	16.193639
170	233.48067		0	0	0.25	0	0	609	163.11576	9503.3178	110	48	EFRT	927457.18	233.48067	22.580501	11.529142
170	219.93114		0	0	0.25	0	0	822	156.37574	9503.3178	110	48	EFRT	837703.26	219.93114	23.211478	10.704405
170	243.49519		0	0	0.25	0	0	1476	173.13028	9503.3178	110	48	EFRT	927457.18	243.49519	23.211478	11.851305
170	254.9322		0	0	0.25	0	0	1689	186.83713	9503.3178	110	48	EFRT	897539.21	254.9322	24.438674	12.075374
170	303.01145		0	0	0.25	0	0	2427	232.64654	9503.3178	110	48	EFRT	927457.18	303.01145	26.780701	13.673678
170	286.07818		0	0	0.25	0	0	2511	217.98311	9503.3178	110	48	EFRT	897539.21	286.07818	26.35141	13.020475
170	300.54677		0	0	0.25	0	0	2549	230.18186	9503.3178	110	48	EFRT	927457.18	300.54677	26.638062	13.600849
170	283.26205		0	0	0.25	0	0	2199	212.89714	9503.3178	110	48	EFRT	927457.18	283.26205	25.626359	13.084294
170	250.11951		0	0	0.25	0	0	1735	182.02443	9503.3178	110	48	EFRT	897539.21	250.11951	24.135865	11.925753
170	233.48067		0	0	0.25	0	0	1362	163.11576	9503.3178	110	48	EFRT	927457.18	233.48067	22.580501	11.529142
170	211.34142		0	0	0.25	0	0	723	143.24634	9503.3178	110	48	EFRT	897539.21	211.34142	21.608414	10.676917
170	248.4899		0	0	0.25	0	0	746	178.12499	9503.3178	110	48	EFRT	927457.18	248.4899	23.522399	12.010055
204	1510.1447		0	0	0.25	0	0	609	1283.7461	8659.0148	105	56	FRT (no floating	1089507.3	1510.1447	0	0
204	1376.3881		0	0	0.25	0	0	822	2074.8531	8659.0148	105	56	FRT (no floating	984071.08	1376.3881	0	0
204	1521.7205		0	0	0.25	0	0	1476	2447.2924	8659.0148	105	56	FRT (no floating	1089507.3	1521.7205	0	0
204	1464.5396		0	0	0.25	0	0	1689	2562.2601	8659.0148	105	56	FRT (no floating	1054361.9	1464.5396	0	0
204	1508.1418		0	0	0.25	0	0	2427	3068.744	8659.0148	105	56	FRT (no floating	1089507.3	1508.1418	0	0
204	1457.1036		0	0	0.25	0	0	2511	3559.4478	8659.0148	105	56	FRT (no floating	1054361.9	1457.1036	0	0
204	1500.6741		0	0	0.25	0	0	2549	3704.9009	8659.0148	105	56	FRT (no floating	1089507.3	1500.6741	0	0
204	1499.7525		0	0	0.25	0	0	2199	3418.3901	8659.0148	105	56	FRT (no floating	1089507.3	1499.7525	0	0
204	1452.7353		0	0	0.25	0	0	1735	3084.7396	8659.0148	105	56	FRT (no floating	1054361.9	1452.7353	0	0
204	1497.8791		0	0	0.25	0	0	1362	2721.0996	8659.0148	105	56	FRT (no floating	1089507.3	1497.8791	0	0
204	1456.0993		0	0	0.25	0	0	723	1933.2045	8659.0148	105	56	FRT (no floating	1054361.9	1456.0993	0	0
204	1513.3179		0	0	0.25	0	0	746	1436.3339	8659.0148	105	56	FRT (no floating	1089507.3	1513.3179	0	0
205	2925.9941		0	0	0.25	0	0	609	592.58219	7853.9816	100	40	FRT (no floating	1739317	2925.9941	0	0
205	2640.7387		0	0	0.25	0	0	822	1017.204	7853.9816	100	40	FRT (no floating	1570996	2640.7387	0	0
205	2915.1405		0	0	0.25	0	0	1476	1223.0024	7853.9816	100	40	FRT (no floating	1739317	2915.1405	0	0
205	2799.6291		0	0	0.25	0	0	1689	1290.2317	7853.9816	100	40	FRT (no floating	1683210	2799.6291	0	0
205	2870.561		0	0	0.25	0	0	2427	1572.3939	7853.9816	100	40	FRT (no floating	1739317	2870.561	0	0
205	2756.2676		0	0	0.25	0	0	2511	1830.0799	7853.9816	100	40	FRT (no floating	1683210	2756.2676	0	0
205	2837.5599		0	0	0.25	0	0	2549	1905.8532	7853.9816	100	40	FRT (no floating	1739317	2837.5599	0	0
205	2844.021		0	0	0.25	0	0	2199	1747.6776	7853.9816	100	40	FRT (no floating	1739317	2844.021	0	0
205	2761.4002		0	0	0.25	0	0	1735	1563.1502	7853.9816	100	40	FRT (no floating	1683210	2761.4002	0	0
205	2860.4683		0	0	0.25	0	0	1362	1362.5027	7853.9816	100	40	FRT (no floating	1739317	2860.4683	0	0
205	2801.2239		0	0	0.25	0	0	723	936.76742	7853.9816	100	40	FRT (no floating	1683210	2801.2239	0	0
205	2927.8181		0	0	0.25	0	0	746	675.93273	7853.9816	100	40	FRT (no floating	1739317	2927.8181	0	0
241	341.95715		0	0	0.25	0	0	609	277.18198	11309.734	120	42	EFRT	981293.25	341.95715	22.580501	18.292745
241	324.38235		0	0	0.25	0	0	822	265.87575	11309.734	120	42	EFRT	886329.39	324.38235	23.211478	16.984175
241	359.1376		0	0	0.25	0	0	1476	294.36244	11309.734	120	42	EFRT	981293.25	359.1376	23.211478	18.803907
241	380.65676		0	0	0.25	0	0	1689	317.97112	11309.734	120	42	EFRT	949638.63	380.65676	24.438674	19.159427
241	461.29342		0	0	0.25	0	0	2427	396.51825	11309.734	120	42	EFRT	981293.25	461.29342	26.780701	21.69538
241	434.12167		0	0	0.25	0	0	2511	371.43602	11309.734	120	42	EFRT	949638.63	434.12167	26.35141	20.658973
241	457.06152		0	0	0.25	0	0	2549	392.28635	11309.734	120	42	EFRT	981293.25	457.06152	26.638062	21.579826
241	427.38643		0	0	0.25	0	0	2199	362.61126	11309.734	120	42	EFRT	981293.25	427.38643	25.626359	20.760233
241	372.39731		0	0	0.25	0	0	1735	309.71167	11309.734	120	42	EFRT	949638.63	372.39731	24.135865	18.922031
241	341.95715		0	0	0.25	0	0	1362	277.18198	11309.734	120	42	EFRT	981293.25	341.95715	22.580501	18.292745
241	305.8724		0	0	0.25	0	0	723	243.18675	11309.734	120	42	EFRT	949638.63	305.8724	21.608414	16.94056
241	367.70743		0	0	0.25	0	0	746	302.93226	11309.734	120	42	EFRT	981293.25	367.70743	23.522399	19.055788
501	149.81312	0.5	0	0	0.25	0	0	609	10.141077	962.11275	35	15	FRT (no floating	22040.537	149.81312	0	0
501	150.54241	0.5	0	0	0.25	0	0	822	17.084392	962.11275	35	15	FRT (no floating	19907.582	150.54241	0	0
501	173.7511	0.5	0	0	0.25	0	0	1476	21.083836	962.11275	35	15	FRT (no floating	22040.537	173.7511	0	0
501	190.00209	0.5	0	0	0.25	0	0	1689	24.908388	962.11275	35	15	FRT (no floating	21329.552	190.00209	0	0
501	224.44026	0.5	0	0	0.25	0	0	2427	33.810858	962.11275	35	15	FRT (no floating	22040.537	224.44026	0	0
501	256.4522	0.5	0	0	0.25	0	0	2511	45.146567	962.11275	35	15	FRT (no floating	21329.552	256.4522	0	0
501	279.49124	0.5	0	0	0.25	0	0	2549	49.68677	962.11275	35	15	FRT (no floating	22040.537	279.49124	0	0
501	265.35584	0.5	0	0	0.25	0	0	2199	43.971906	962.11275	35	15	FRT (no floating	22040.537	265.35584	0	0
501	242.20656	0.5	0	0	0.25	0	0	1735	37.610095	962.11275	35	15	FRT (no floating	21329.552	242.20656	0	0
501	232.95674	0.5	0	0	0.25	0	0	1362	31.493513	962.11275	35	15	FRT (no floating	22040.537	232.95674	0	0
501	180.52613	0.5	0	0	0.25	0	0	723	18.313879	962.11275	35	15	FRT (no floating	21329.552	180.52613	0	0
501	150.33099	0.5	0	0	0.25	0	0	746	11.274002	962.11275	35	15	FRT (no floating	22040.537	150.33099	0	0
1001	524.53979		0	0	0.25	0	0	609	263.18854	13273.229	130	48	EFRT	4289206.5	524.53979	22.580501	17.165042
1001	489.00016		0	0	0.25	0	0	822	252.94097	13273.229	130	48	EFRT	3874122	489.00016	23.211478	15.937141
1001	541.39304		0	0	0.25	0	0	1476	280.04179	13273.229	130	48	EFRT	4289206.5	541.39304	23.211478	17.644692
1001	556.50219		0	0	0.25	0	0	1689	303.58163	13273.229	130	48	EFRT	4150845	556.50219	24.438674	17.978294
1001	642.22241		0	0	0.25	0	0	2427	380.87116	13273.229	130	48	EFRT	4289206.5	642.22241	26.780701	20.357912
1001	609.32974		0	0	0.25	0	0	2511	356.40917	13273.229	130	48	EFRT	4150845	609.32974	26.35141	19.385398
1001	638.0291		0	0	0.25	0	0	2549	376.67785	13273.229	130	48	EFRT	4289206.5	638.0291	26.638062	20.249482
1001	608.65898		0	0	0.25	0	0	2199	347.30773	13273.229	130	48	EFRT	4289206.5	608.65898	25.626359	19.480414
1001	548.36402		0	0	0.25	0	0	1735	295.44345	13273.229	130	48	EFRT	4150845	548.36402	24.135865	17.755533
1001	524.53979		0	0	0.25	0	0	1362	263.18854	13273.229	130	48	EFRT	4289206.5	524.53979	22.580501	17.165042
1001	483.12013		0	0	0.25	0	0	723	230.19957	13273.229	130	48	EFRT	4150845	483.12013	21.608414	15.896216
1001	549.81341		0	0	0.25	0	0	746	288.46216	13273.229	130	48	EFRT	4289206.5	549.81341	23.522399	17.881045
1003	498.83872		0	0	0.25	0	0	609	288.4472	13273.229	130	48	EFRT	3452873	498.83872	22.580501	17.165042
1003	466.47107		0	0	0.25	0	0	822	276.44002	13273.229	130	48	EFRT	3118724	466.47107	23.211478	15.937141
1003	516.45011		0	0	0.25	0	0	1476	306.05859	13273.229	130	48	EFRT	3452873	516.45011	23.211478	17.644692
1003	533.73296		0	0	0.25	0	0	1689	330.12827	13273.229	130	48	EFRT	3341490	533.73296	24.438674	17.978294
1003	621.21773		0	0	0.25	0	0	2427	410.82621	13273.229	130	48	EFRT	3452873	621.21773	26.780701	20.357912
1003	588.56934		0	0	0.25	0	0	2511	384.96465	13273.229	130	48	EFRT	3341490	588.56934	26.35141	19.385398
1003	616.87633		0	0	0.25	0	0	2549	406.48481	13273.229	130	48	EFRT	3452873	616.87633	26.638062	20.249482
1003	586.4361		0	0	0.25	0	0	2199	376.04458	13273.229	130	48	EFRT	3452873	586.4361	25.626359	19.480414
1003	525.26347		0	0	0.25	0	0	1735	321.65877	13273.229	130	48	EFRT	3341490	525.26347	24.135865	17.755533
1003	498.83872		0	0	0.25	0	0	1362	288.4472	13273.229	130	48	EFRT	3452873	498.83872	22.580501	17.165042
1003	457.071		0	0	0.25	0	0	723	253.4663	13273.229	130	48	EFRT	3341490	457.071	21.608414	15.896216
1003	525.23599		0	0	0.25	0	0	746	314.84447	13273.229	130	48	EFRT	3452873	525.23599	23.522399	17.881045
1004	172.19416		0	0	0.25	0	0	609	92.033902	13273.229	130	48	domed EFRT	1315562.5	172.19416	14	10.642394
1004	155.53021		0	0	0.25	0	0	822	83.127395	13273.229	130	48	domed EFRT	1188250	155.53021	14	9.6124848
1004	172.19416		0	0	0.25	0	0	1476	92.033902	13273.229	130	48	domed EFRT	1315562.5	172.19416	14	10.642394
1004	166.63951		0	0	0.25	0	0	1689	89.065066	13273.229	130	48	domed EFRT	1273125	166.63951	14	10.299091
1004	172.19416		0	0	0.25	0	0	2427	92.033902	13273.229	130	48	domed EFRT	1315562.5	172.19416	14	10.642394
1004	166.63951		0	0	0.25	0	0	2511	89.065066	13273.229	130	48	domed EFRT	1273125	166.63951	14	10.299091
1004	172.19416		0	0	0.25	0	0	2549	92.033902	13273.229	130	48	domed EFRT	1315562.5	172.19416	14	10.642394
1004	172.19416		0	0	0.25	0	0	2199	92.033902	13273.229	130	48	domed EFRT	1315562.5	172.19416	14	10.642394
1004	166.63951		0	0	0.25	0	0	1735	89.065066	13273.229	130	48	domed EFRT	1273125	166.63951	14	10.299091
1004	172.19416		0	0	0.25	0	0	1362	92.033902	13273.229	130	48	domed EFRT	1315562.5	172.19416	14	10.642394
1004	166.63951		0	0	0.25	0	0	723	89.065066	13273.229	130	48	domed EFRT	1273125	166.63951	14	10.299091
1004	172.19416		0	0	0.25	0	0	746	92.033902	13273.229	130	48	domed EFRT	1315562.5	172.19416	14	10.642394

Appendix C, Table C-6: TankESP Output Report for Tables C-4 and C-5
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

					Vapor Control Efficiency																	Benzene
Tank ID	Vapor control efficiency for Refill/Initial purge	Vapor Density	Vapor Pressure Function (P*)	Vapor Space Temperature (degF)	VCtrl Efficiency	Vent Pressure Range (psig)	Volume of vapor space (ft3)	Working loss (w/out control) (lbs)	Acetaldehyde	Acetic acid	Acetic anhydride(acetic acid anhydride)	Acetonitrile	Acrylamide	Acrylic acid(2-propenoic acid)	Acrylonitrile(2-propenenitrile)	Allyl alcohol	Allyl chloride(3-chloro-1-propene)	Ammonia	Aniline	Anthracene	Benz[a]anthracene	Benzene
167	0	0.067866023	0.13073815	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.997491883
167	0	0.067548015	0.13073815	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.955600246
167	0	0.067256741	0.13073815	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	1.090428557
167	0	0.066674787	0.13073815	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	1.191841753
167	0	0.065992028	0.13073815	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	1.498740563
167	0	0.065318733	0.13073815	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	1.55726627
167	0	0.06506396	0.13073815	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	1.692109882
167	0	0.065311097	0.13073815	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	1.552767146
167	0	0.065623354	0.13073815	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	1.335069486
167	0	0.065929861	0.13073815	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	1.224540379
167	0	0.066952363	0.13073815	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	1.009639159
167	0	0.067859511	0.13073815	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	1.039022062
170	0	0.054057909	0.091085792	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.737571779
170	0	0.053804604	0.091085792	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.703860627
170	0	0.053572593	0.091085792	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.80171286
170	0	0.053109044	0.091085792	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.869979862
170	0	0.0525652	0.091085792	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	1.082904574
170	0	0.052028894	0.091085792	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	1.121875898
170	0	0.051825958	0.091085792	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	1.216442635
170	0	0.052022812	0.091085792	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	1.120545873
170	0	0.052271537	0.091085792	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.96906239
170	0	0.052515682	0.091085792	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.894678671
170	0	0.053330144	0.091085792	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.744710303
170	0	0.054052722	0.091085792	0	0	0	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.766089437
204	0	0.033573119	0	53.407684	0.98	0.06	251923.21	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.38265E-06	no data	0.177511415
204	0	0.033424875	0	55.683254	0.98	0.06	251923.21	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.45524E-06	no data	0.171746511
204	0	0.033308619	0	57.481974	0.98	0.06	251923.21	74848.744	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.08435E-06	no data	0.196650595
204	0	0.033028846	0	61.862543	0.98	0.06	251923.21	70664.721	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.91936E-06	no data	0.212825344
204	0	0.032720422	0	66.77853	0.98	0.06	251923.21	72338.347	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	6.34213E-06	no data	0.246449631
204	0	0.032388978	0	72.165797	0.98	0.06	251923.21	69295.733	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	8.05297E-06	no data	0.274560823
204	0	0.03226378	0	74.229561	0.98	0.06	251923.21	71328.803	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	9.19184E-06	no data	0.298316725
204	0	0.032372534	0	72.435949	0.98	0.06	251923.21	71569.237	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	8.51826E-06	no data	0.28664624
204	0	0.032508769	0	70.206047	0.98	0.06	251923.21	69552.024	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	7.51658E-06	no data	0.264496931
204	0	0.032645565	0	67.985683	0.98	0.06	251923.21	72172.854	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	7.03012E-06	no data	0.259202622
204	0	0.033125617	0	60.338975	0.98	0.06	251923.21	70871.761	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.71426E-06	no data	0.207566232
204	0	0.033575865	0	53.365727	0.98	0.06	251923.21	74229.561	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.36028E-06	no data	0.177071585
205	0	0.061019998	0	53.471313	0.98	0.06	165260.86	145707.12	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	5.008820454
205	0	0.060747971	0	55.769137	0.98	0.06	165260.86	131019.73	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	4.800207822
205	0	0.060528721	0	57.636187	0.98	0.06	165260.86	144534.02	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	5.493171169
205	0	0.060017905	0	62.039011	0.98	0.06	165260.86	138691.22	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	5.933912842
205	0	0.05944894	0	67.032104	0.98	0.06	165260.86	141955.66	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	6.848638448
205	0	0.058846064	0	72.428147	0.98	0.06	165260.86	135983.3	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	7.582897093
205	0	0.058618274	0	74.495881	0.98	0.06	165260.86	139972.14	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	8.235890313
205	0	0.058819804	0	72.665701	0.98	0.06	165260.86	140453.37	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	7.932947092
205	0	0.059072634	0	70.38732	0.98	0.06	165260.86	136506.86	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	7.332795313
205	0	0.059325505	0	68.127986	0.98	0.06	165260.86	141660.91	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	7.215854944
205	0	0.060205372	0	60.414514	0.98	0.06	165260.86	139124.43	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	5.816035143
205	0	0.061023285	0	53.443669	0.98	0.06	165260.86	145714.97	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	4.990069759
241	0	0.077944097	0.14452153	0	0	0	0	64.775168	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000595938	no data	0.542261523
241	0	0.07757716	0.14452153	0	0	0	0	58.506603	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000538267	no data	0.521801537
241	0	0.077237407	0.14452153	0	0	0	0	64.775168	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.00059594	no data	0.596964936
241	0	0.07656751	0.14452153	0	0	0	0	62.685646	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000576719	no data	0.657758568
241	0	0.075777868	0.14452153	0	0	0	0	64.775168	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000595951	no data	0.836744495
241	0	0.075004284	0.14452153	0	0	0	0	62.685646	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000576731	no data	0.872342532
241	0	0.074711522	0.14452153	0	0	0	0	64.775168	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000595959	no data	0.950047847
241	0	0.074997885	0.14452153	0	0	0	0	64.775168	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000595955	no data	0.868053623
241	0	0.075359928	0.14452153	0	0	0	0	62.685646	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000576725	no data	0.741515751
241	0	0.075714733	0.14452153	0	0	0	0	64.775168	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000595945	no data	0.675244226
241	0	0.076893916	0.14452153	0	0	0	0	62.685646	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000576716	no data	0.550649751
241	0	0.077935496	0.14452153	0	0	0	0	64.775168	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000595938	no data	0.566615428
501	0	0.002660879	0	53.456573	0	0.06	7566.6159	139.67204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.001152793
501	0	0.002814907	0	55.749241	0	0.06	7566.6159	133.45802	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.001157517
501	0	0.00290845	0	57.600462	0	0.06	7566.6159	152.66726	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.001335285
501	0	0.003250025	0	61.998131	0	0.06	7566.6159	165.09371	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.001457315
501	0	0.003631664	0	66.973362	0	0.06	7566.6159	190.62941	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.00171732
501	0	0.00415975	0	72.367372	0	0.06	7566.6159	211.30563	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.001955432
501	0	0.004377984	0	74.434186	0	0.06	7566.6159	229.80447	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.00212796
501	0	0.004217565	0	72.612477	0	0.06	7566.6159	221.38394	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.002022565
501	0	0.004027674	0	70.345327	0	0.06	7566.6159	204.59647	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.00184851
501	0	0.003838058	0	68.09502	0	0.06	7566.6159	201.46323	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.001780175
501	0	0.003193301	0	60.397015	0	0.06	7566.6159	162.21225	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.001385147
501	0	[illegible]	0	53.425613	0	0.06	7566.6159	139.05698	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	0.001156839
1001	0	[illegible]	[illegible]	0	0	0	0	261.35125	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.002404438	no data	1.40616044
1001	0	[illegible]	[illegible]	0	0	0	0	236.05919	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.002171751	no data	1.302456888
1001	0	[illegible]	[illegible]	0	0	0	0	261.35125	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.00240444	no data	1.461145453
1001	0	[illegible]	[illegible]	0	0	0	0	252.92056	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.002326881	no data	1.495203529
1001	0	[illegible]	[illegible]	0	0	0	0	261.35125	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.002404451	no data	1.705487874
1001	0	[illegible]	[illegible]	0	0	0	0	252.92056	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.002326893	no data	1.712867173
1001	0	[illegible]	[illegible]	0	0	0	0	261.35125	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.002404459	no data	1.8193367
1001	0	[illegible]	[illegible]	0	0	0	0	261.35125	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.002404455	no data	1.735395591
1001	0	[illegible]	[illegible]	0	0	0	0	252.92056	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.002326886	no data	1.578656181
1001	0	[illegible]	[illegible]	0	0	0	0	261.35125	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.002404445	no data	1.538510362
1001	0	[illegible]	[illegible]	0	0	0	0	252.92056	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.002326877	no data	1.385725762
1001	0	[illegible]	[illegible]	0	0	0	0	261.35125	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.002404438	no data	1.4312045
1003	0	[illegible]	[illegible]	0	0	0	0	210.39152	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.001935609	no data	1.206527021
1003	0	[illegible]	[illegible]	0	0	0	0	190.03105	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.001748293	no data	1.124440612
1003	0	[illegible]	[illegible]	0	0	0	0	210.39152	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.001935611	no data	1.265834139
1003	0	[illegible]	[illegible]	0	0	0	0	203.6047	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.001873176	no data	1.311648498
1003	0	[illegible]	[illegible]	0	0	0	0	210.39152	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.001935623	no data	1.524957793
1003	0	[illegible]	[illegible]	0	0	0	0	203.6047	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.001873189	no data	1.54395064
1003	0	[illegible]	[illegible]	0	0	0	0	210.39152	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.001935632	no data	1.648083588
1003	0	[illegible]	[illegible]	0	0	0	0	210.39152	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.001935627	no data	1.559613933
1003	0	[illegible]	[illegible]	0	0	0	0	203.6047	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.001873182	no data	1.402998283
1003	0	[illegible]	[illegible]	0	0	0	0	210.39152	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.001935617	no data	1.351578796
1003	0	[illegible]	[illegible]	0	0	0	0	203.6047	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.001873172	no data	1.196316001
1003	0	[illegible]	[illegible]	0	0	0	0	210.39152	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.001935609	no data	1.232705205
1004	0	[illegible]	[illegible]	0	0	0	0	80.160259	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000737476	no data	0.439878908
1004	0	[illegible]	[illegible]	0	0	0	0	72.402815	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000666108	no data	0.40215277
1004	0	[illegible]	[illegible]	0	0	0	0	80.160259	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000737477	no data	0.448527762
1004	0	[illegible]	[illegible]	0	0	0	0	77.574444	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000713688	no data	0.445601232
1004	0	[illegible]	[illegible]	0	0	0	0	80.160259	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000737478	no data	0.473855117
1004	0	[illegible]	[illegible]	0	0	0	0	77.574444	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.00071369	no data	0.476517134
1004	0	[illegible]	[illegible]	0	0	0	0	80.160259	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.00073748	no data	0.500080758
1004	0	[illegible]	[illegible]	0	0	0	0	80.160259	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.00073748	no data	0.494410612
1004	0	[illegible]	[illegible]	0	0	0	0	77.574444	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000713689	no data	0.471971178
1004	0	[illegible]	[illegible]	0	0	0	0	80.160259	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000737479	no data	0.481022409
1004	0	[illegible]	[illegible]	0	0	0	0	77.574444	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000713688	no data	0.443632302
1004	0	[illegible]	[illegible]	0	0	0	0	80.160259	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000737476	no data	0.439478284

Appendix C, Table C-6: TankESP Output Report for Tables C-4 and C-5
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	Benzo(g,h,i)perylene	Benzo[a]pyrene	Biphenyl	Butadiene (1,3)	Butane	Butanol (2)	Butene (1)	Butene (2-methyl-1)	Butene (2-methyl-2) {isopentene}	Butene (cis-2) {(Z)-2-butene}	Butene (trans-2({(E)-2-butene}	Butyl acetate (n-)	Butyl alcohol (n-) {butanol (1)}	Butyl alcohol (t-)	Butyl chloride (-n){1-chloro-butane}	Butyl ether (di-tert)	Butylbenzene (n-)	Butylbenzene (sec-)	Carbon disulfide	Carbon tetrachloride	Carbonyl sulfide	Chlorobenzene	Chlorobutane (2)	Chloroform	Chloroprene{2-chloro-1,3-butadiene}	Chlorotoluene (o){1 -chloro-2methylbenzene}	Chrysene	Chrysene{benzo[a]phenanthrene}	Cresol Cresol	Cresol (m-)
167	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
167	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
167	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
167	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
167	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
167	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
167	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
167	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
167	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
167	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
167	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
167	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
170	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
170	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
170	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
170	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
170	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
170	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
170	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
170	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
170	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
170	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
170	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
170	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
204	0	no data	0	5.252093462	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
204	0	no data	0	4.979838551	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
204	0	no data	0	5.634819847	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
204	0	no data	0	5.861582128	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
204	0	no data	0	6.524951491	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
204	0	no data	0	6.930249086	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
204	0	no data	0	7.396316784	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
204	0	no data	0	7.200943618	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
204	0	no data	0	6.753419796	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
204	0	no data	0	6.731930612	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
204	0	no data	0	5.753921925	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
204	0	no data	0	5.247213514	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
205	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
205	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
205	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
205	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
205	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
205	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
205	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
205	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
205	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
205	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
205	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
205	0	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
241	0.000200803	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
241	0.00018137	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
241	0.000200803	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
241	0.000194326	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
241	0.000200803	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
241	0.000194326	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
241	0.000200803	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
241	0.000200803	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
241	0.000194326	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
241	0.000200803	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
241	0.000194326	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
241	0.000200803	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
501	0	no data	0.000414777	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.019170357	no data
501	0	no data	0.000440611	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.020294619	no data
501	0	no data	0.000525624	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.024160414	no data
501	0	no data	0.000640387	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.029234296	no data
501	0	no data	0.000842547	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.0381942	no data
501	0	no data	0.001095187	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.049220425	no data
501	0	no data	0.001252435	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.05610277	no data
501	0	no data	0.00114747	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.051526302	no data
501	0	no data	0.001002076	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.045132491	no data
501	0	no data	0.000920195	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.041573532	no data
501	0	no data	0.000597226	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.027296531	no data
501	0	no data	0.000414505	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.019162633	no data
1001	0.000810189	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1001	0.000731784	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1001	0.000810189	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1001	0.000784054	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1001	0.000810189	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1001	0.000784054	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1001	0.000810189	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1001	0.000810189	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1001	0.000784054	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1001	0.000810189	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1001	0.000784054	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1001	0.000810189	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1003	0.000652214	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1003	0.000589096	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1003	0.000652214	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1003	0.000631175	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1003	0.000652214	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1003	0.000631175	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1003	0.000652214	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1003	0.000652214	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1003	0.000631175	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1003	0.000652214	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1003	0.000631175	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1003	0.000652214	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1004	0.000248497	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1004	0.000224449	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1004	0.000248497	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1004	0.000240481	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1004	0.000248497	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1004	0.000240481	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1004	0.000248497	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1004	0.000248497	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1004	0.000240481	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1004	0.000248497	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1004	0.000240481	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data
1004	0.000248497	no data	0	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data

Appendix C, Table C-6: TankESP Output Report for Tables C-4 and C-5
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	Cresol (o-)	Cresol (p-)	Cumene (isopropylbenzene)	Cyclohexane	Cyclohexanol	Cyclohexanone	Cyclohexene	Cyclopentadiene	Cyclopentane	Cyclopentanone	Cyclopentene	Decane (n-)	DGM ether (diethylene glycol monomethyl ether)	Dibromoethane (1,2) (ethylene dibromide)	Dibromopropane (1,2)	Dibromopropane (1,3)	Dichloroethane (1,1)	Dichloroethane (1,2)	Dichloroethylene (1,2) (1,2-dichloroethene)	Dichloroethylene (trans-1,2)	Dichlorotoluene (3,4)	Diethanolamine (DEA)	Diethoxyethane (1,1)	Diethoxymethane	Diethylbenzene (1,2)	Diethylbenzene (1,4)	Diethyl (n,n) aniline (N,N-diethylbenzenamine)
167	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	0.166942642	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	0.151442077	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	0.168122551	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	0.164430493	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	0.173358986	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	0.169596566	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	0.176509926	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	0.174579272	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	0.166708979	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	0.170263429	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	0.162343645	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	0.167356658	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	0.039489932	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	0.03866202	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	0.044812182	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	0.050465198	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	0.060724123	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	0.07067689	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	0.078211367	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	0.074296586	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	0.067504926	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	0.065244701	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	0.049103468	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	0.039280867	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	0.067692794	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	0.061482229	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	0.068308137	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	0.067004727	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	0.071039088	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	0.069696301	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	0.072675053	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	0.071665001	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	0.068183168	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	0.069411493	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	0.065912806	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	0.067909114	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	0.064792675	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	0.066460615	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	0.077647152	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	0.088343347	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	0.108528264	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	0.129903011	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	0.144031184	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	0.135016369	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	0.121299471	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	0.114738434	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	0.083368081	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	0.064917734	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	0.266225312	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	0.240804876	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	0.266842446	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	0.259145172	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	0.269617998	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	0.26186899	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	0.271262166	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	0.270230959	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	0.260320522	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	0.267935613	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	0.258031311	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	0.266447655	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	0.214972934	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	0.194538034	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	0.215640465	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	0.209659289	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	0.218593291	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	0.21257427	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	0.22037029	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	0.219280108	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	0.210943687	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	0.216847375	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	0.208483205	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	0.215205409	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	0.08172352	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	0.073872775	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	0.081827717	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	0.079332356	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	0.082151105	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	0.079745186	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	0.082511288	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	0.082431412	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	0.079682246	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	0.082247138	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	0.079307343	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	0.081718777	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

Appendix C, Table C-6: TankESP Output Report for Tables C-4 and C-5
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	Diethyl ketone (3-pentanone)	Diethyl sulfide	Diethylamine	Diethylbenzene (1,3)	Di-isopropyl ether	Dimethoxyethane (1,2)	Dimethylpentane (2,2)	Dimethyl butane (2,2)	Dimethyl butane (2,3)	Dimethyl cyclopentane (1,1)	Dimethyl formamide (n,n)	Dimethyl hydrazine (1,1)	Dimethyl phthalate	Dimethyl sulfide	Dimethyl-2-ethylbenzene (1,3)	Dimethyl-2-ethylbenzene (1,4)	Dimethylhexane (2,4)	Dimethylpentane (2,3)	Dimethylpentane (2,4)	Dimethylpentane (3,3)	Dioxane (1,4)	Dipropyl ether (di-n-propyl ether)	DMN (2,6) (2,6-dimethyl-naphthalene)	Dodecane (n-)	Epichlorohydrin (chloromethyl oxirane)	Ethanol (ethyl alcohol)
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
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167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
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167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
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204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
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205	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
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205	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
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241	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
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241	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
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501	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
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1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
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1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

Appendix C, Table C-6: TankESP Output Report for Tables C-4 and C-5
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/O ratio: calculated

							Ethylbenzene																	Hexane					Hydrogen Sulfide (H2S)				
Tank ID	Ethylpentane (3)	Ethyl acetate	Ethyl acrylate (ethyl ester 2-propenoic acid)	Ethyl chloride	Ethyl ether (diethyl ether)	Ethylamine	Ethylbenzene	Ethylcyclohexane	Ethylcyclopentane	Ethylene	Ethylene glycol	Ethyleneoxide	Fluoranthene	Fluorobenzene	Fonnic acid	Formic acid	Freon 11 (trichlorofluoromethane)	Furan	Furfural (2-furancarboxaldehyde)	Heneicosane (n)	Heptane (n-)	Heptene (1)	Hexadiene (1,5)	Hexane (n-)	Hexanol (1)	Hexene (1)	Hydrogen cyanide (hydrocyanic acid)	Hydrogen fluoride	Hydrogen sulfide	Indene	Iso-butane	isobutene (methylpropene (2))	Isobutyl alcohol (2-methyl 1-propanol)
167	no data	no data	no data	no data	no data	no data	1.155800872	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.385498103	no data	no data	no data	no data	0	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	1.054284459	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.316348501	no data	no data	no data	no data	0	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	1.174143496	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.657330134	no data	no data	no data	no data	0	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	1.163181029	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.971964774	no data	no data	no data	no data	0	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	1.25529252	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.852381052	no data	no data	no data	no data	0	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	1.2412581	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.0215375	no data	no data	no data	no data	0	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	1.301331193	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.390619238	no data	no data	no data	no data	0	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	1.272021944	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.987983968	no data	no data	no data	no data	0	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	1.196679986	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.371733402	no data	no data	no data	no data	0	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	1.205612753	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.030357931	no data	no data	no data	no data	0	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	1.129858391	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.427122568	no data	no data	no data	no data	0	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	1.162670635	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.51272793	no data	no data	no data	no data	0	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	2.464298616	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.322431843	no data	no data	no data	no data	0	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	2.245512983	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.213903363	no data	no data	no data	no data	0	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	2.499290037	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.680906038	no data	no data	no data	no data	0	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	2.469934771	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.089348421	no data	no data	no data	no data	0	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	2.6537592	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.253469976	no data	no data	no data	no data	0	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	2.618689813	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.471808253	no data	no data	no data	no data	0	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	2.741602522	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.963790607	no data	no data	no data	no data	0	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	2.685850952	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.434312134	no data	no data	no data	no data	0	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	2.533954409	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.617866573	no data	no data	no data	no data	0	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	2.559535756	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.175129807	no data	no data	no data	no data	0	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	2.406614037	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.373559263	no data	no data	no data	no data	0	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	2.477333329	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.48938291	no data	no data	no data	no data	0	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	0.030928079	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.27498897	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	0.030389889	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.258689026	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	0.035113085	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.291368325	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	0.039168833	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.298473287	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	0.046745931	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.327221308	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	0.054012248	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.341217797	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	0.059492833	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.361673911	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	0.056595002	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.353898596	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	0.051577724	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.333983135	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	0.049892133	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.335109037	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	0.038012103	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.293728074	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	0.030814859	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.274899719	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	0.601723428	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	32.6472308	no data	no data	no data	no data	0	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	0.585693368	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	31.17187413	no data	no data	no data	no data	0	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	0.676508386	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	35.59294098	no data	no data	no data	no data	0	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	0.753292388	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	38.17217366	no data	no data	no data	no data	0	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	0.896262345	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	43.73908808	no data	no data	no data	no data	0	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	1.029215028	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	48.01083893	no data	no data	no data	no data	0	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	1.133225826	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	51.97645692	no data	no data	no data	no data	0	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	1.080525052	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	50.18521668	no data	no data	no data	no data	0	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	0.986304997	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	46.5271308	no data	no data	no data	no data	0	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	0.957911043	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	45.92814515	no data	no data	no data	no data	0	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	0.734415217	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	37.4612062	no data	no data	no data	no data	0	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	0.598791914	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	32.53380037	no data	no data	no data	no data	0	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	0.845800867	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	1.998444676	no data	no data	no data	no data	0	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	0.772537206	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	1.948674661	no data	no data	no data	no data	0	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	0.861116712	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.240955406	no data	no data	no data	no data	0	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	0.855710126	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.524318795	no data	no data	no data	no data	0	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	0.928726023	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.304618622	no data	no data	no data	no data	0	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	0.920753495	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.458468563	no data	no data	no data	no data	0	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	0.966997571	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.78262275	no data	no data	no data	no data	0	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	0.942521787	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.423555926	no data	no data	no data	no data	0	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	0.883496302	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.878663679	no data	no data	no data	no data	0	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	0.887170751	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.57097252	no data	no data	no data	no data	0	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	0.827908467	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.038919989	no data	no data	no data	no data	0	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	0.851516002	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.111527911	no data	no data	no data	no data	0	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	3.80997E-05	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	28.04927595	no data	no data	no data	no data	0	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	3.88542E-05	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	28.06023433	no data	no data	no data	no data	0	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	4.52377E-05	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	32.2984654	no data	no data	no data	no data	0	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	5.08915E-05	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	34.99676965	no data	no data	no data	no data	0	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	6.18196E-05	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	40.94410795	no data	no data	no data	no data	0	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	7.30058E-05	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	46.21912353	no data	no data	no data	no data	0	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	8.05401E-05	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	50.13424332	no data	no data	no data	no data	0	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	7.57805E-05	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	47.7656657	no data	no data	no data	no data	0	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	6.83965E-05	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	43.78514869	no data	no data	no data	no data	0	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	6.50105E-05	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	42.29793075	no data	no data	no data	no data	0	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	4.81189E-05	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	33.30508751	no data	no data	no data	no data	0	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	3.81896E-05	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	28.15538991	no data	no data	no data	no data	0	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	3.230023259	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.429223984	no data	no data	no data	no data	0	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	2.926108187	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.145907902	no data	no data	no data	no data	0	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	3.245391683	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.673103549	no data	no data	no data	no data	0	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	3.163347311	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.883277067	no data	no data	no data	no data	0	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	3.314149394	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.757599485	no data	no data	no data	no data	0	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	3.229205974	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.831314969	no data	no data	no data	no data	0	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	3.352611812	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	6.23786895	no data	no data	no data	no data	0	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	3.327606586	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.870075572	no data	no data	no data	no data	0	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	3.191055042	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.236233507	no data	no data	no data	no data	0	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	3.271192409	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.99903998	no data	no data	no data	no data	0	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	3.134972424	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.386960041	no data	no data	no data	no data	0	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	3.235898305	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.545521545	no data	no data	no data	no data	0	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	2.617623971	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.912143142	no data	no data	no data	no data	0	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	2.373612788	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.689066611	no data	no data	no data	no data	0	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	2.634236578	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.175025135	no data	no data	no data	no data	0	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	2.573489892	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.425246132	no data	no data	no data	no data	0	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	2.707330046	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.324360696	no data	no data	no data	no data	0	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	2.643926199	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.436425188	no data	no data	no data	no data	0	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	2.748905482	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.843849761	no data	no data	no data	no data	0	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	2.722489925	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.456455263	no data	no data	no data	no data	0	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	2.603779024	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.811773392	no data	no data	no data	no data	0	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	2.662744196	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.536645372	no data	no data	no data	no data	0	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	2.54354742	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.902607409	no data	no data	no data	no data	0	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	2.623766298	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.033701423	no data	no data	no data	no data	0	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	0.992557254	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	1.399121467	no data	no data	no data	no data	0	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	0.897928002	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	1.284843504	no data	no data	no data	no data	0	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	0.995113186	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	1.436801924	no data	no data	no data	no data	0	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	0.966516493	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	1.440424591	no data	no data	no data	no data	0	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	1.002923273	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	1.546057673	no data	no data	no data	no data	0	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	0.976368423	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	1.572770036	no data	no data	no data	no data	0	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	1.011455151	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	1.657782579	no data	no data	no data	no data	0	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	1.009575693	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	1.633732622	no data	no data	no data	no data	0	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	0.97488065	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	1.553431106	no data	no data	no data	no data	0	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	1.005213108	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	1.576719771	no data	no data	no data	no data	0	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	0.965911557	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	1.431924236	no data	no data	no data	no data	0	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	0.99244036	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	1.397370864	no data	no data	no data	no data	0	no data	no data	no data	no data

Appendix C, Table C-6: TankESP Output Report for Tables C-4 and C-5
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Mercury (all) pollutant

Tank ID	Iso-octane (2,2,4 trimethylpentane)	Isopentane (2-methylbutane)	Isoprene (2-methyl-1,3-butadiene)	Isopropyl alcohol (isopropanol)	Isopropyl benzene (cumene)	Isopropylbenzene (1-methyl-2)	Isopropyltoluene (n-)	Lead	MDI (methylene diphenyl diisocyanate)	Mercury	Methacrylonitrile (2-methyl-2-propenenitrile)	Methane	Methanol (methyl alcohol)	Methylhexane (2)	Methyl acrylate (methyl ester 2-propenoic acid)	Methyl ethyl ketone (2-butanone)	Methyl isobutyl ketone (hexone)	Methyl methacrylate	Methyl propyl ether	Methyl styrene (alpha)	Methyl-2-ethylbenzene (1)	Methylcyclohexane	Methylcyclopentane
167	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

Appendix C, Table C-6: TankESP Output Report for Tables C-4 and C-5
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions R/D ratio: calculated

															Methyl tertiary-butyl ether	Naphthalene																
Tank ID	Methyldichlorosilane	Methylene chloride (dichloromethane)	Methylheptane (2)	Methylheptane (3)	Methylheptane (4)	Methylhexane (2) (isoheptane)	Methylhexane (3)	Methylnaphthalene (1-)	Methylnaphthalene (2-)	Methyloctane (4)	Methylpentane (2) (isohexane)	Methylpentane (3)	Monoethanolamine (MEA)	Morpholine	MTBE (Methyl tert-butyl ether)	Naphthalene	Neopentane (dimethylpropane (2,2))	Nickel	Nitrates (Propyl nitrate)	Nitrobenzene	Nitromethane	Nonadecane (n)	Nonane (n-)	Octadecane (n)	Octane (n-)	Octanol (1)	Octene (1)	PACs (Chrysene)	PAHs	Pentachloroethane	Pentadiene (1,2)	Pentadiene (1,4)
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.212774693	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.192229772	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.212860797	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.206122022	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.213252557	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.206535589	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.213526667	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.213372061	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.206314656	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.213039762	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.20597747	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.212800468	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.000195294	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.98886E-12	1.80577E-11	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.000196268	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.33574E-12	2.01534E-11	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.000229786	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.15385E-12	2.50962E-11	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.000267915	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.96063E-12	3.60121E-11	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.000334181	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	9.16519E-12	5.5373E-11	no data	no data	no data
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1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.031286198	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.002044087	0.002388776	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.030282967	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.001978148	0.002311718	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.031295127	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.002044087	0.002388776	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.031293104	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.002044087	0.002388776	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.030281397	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.001978148	0.002311718	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.031288529	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.002044087	0.002388776	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.030272389	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.001978148	0.002311718	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0.031276235	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.002044087	0.002388776	no data	no data	no data

Appendix C, Table C-6: TankESP Output Report for Tables C-4 and C-5
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

						Phenol										Propylene					Styrene								Toluene				
Tank ID	Pentadiene (2,3)	Pentane (n-)	Pentene (1)	Pentyne (1)	Phenanthrene	Phenol	Phosgene	Picoline (3) {3-methyl pyridine}	Propane	Propanethiol (1)	Propanethiol (2)	Propyl alcohol (n) {propanol (1)}	Propylamine (n) {1-propanamine}	Propylbenzene (n-)	Propylcyclohexane	Propylene	Propylene glycol (1,2) {1,2 propanediol}	Propylene oxide	Pyridine	Resorcinol	Styrene	Tetra ethyl lead	Tetrachloroethane (1,1,1,2)	Tetrachloroethane (1,1,2,2)	Tetrachloroethylene	Tetradecane (n-)	Tetrahydrofuran	Tetramethylbenzene (1,2,4,5)	Toluene	Toluene diisocyanate	Trichloroethane (1,1,1)	Trichloroethane (1,1,2)	Trichloroethylene
167	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	4.437090035	no data	no data	no data	no data
167	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	4.113328527	no data	no data	no data	no data
167	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	4.620581364	no data	no data	no data	no data
167	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	4.740754963	no data	no data	no data	no data
167	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.428458803	no data	no data	no data	no data
167	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.489983491	no data	no data	no data	no data
167	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.847575821	no data	no data	no data	no data
167	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.56436887	no data	no data	no data	no data
167	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.048701154	no data	no data	no data	no data
167	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	4.909747906	no data	no data	no data	no data
167	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	4.394496311	no data	no data	no data	no data
167	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	4.512388861	no data	no data	no data	no data
170	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.07883856	no data	no data	no data	no data	no data	no data	no data	13.43576145	no data	no data	no data	no data
170	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.07162207	no data	no data	no data	no data	no data	no data	no data	12.42507771	no data	no data	no data	no data
170	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.07957727	no data	no data	no data	no data	no data	no data	no data	13.93928793	no data	no data	no data	no data
170	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.07809365	no data	no data	no data	no data	no data	no data	no data	14.22734578	no data	no data	no data	no data
170	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.08284836	no data	no data	no data	no data	no data	no data	no data	16.15141942	no data	no data	no data	no data
170	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.08128314	no data	no data	no data	no data	no data	no data	no data	16.28078977	no data	no data	no data	no data
170	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.08476398	no data	no data	no data	no data	no data	no data	no data	17.30200131	no data	no data	no data	no data
170	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.08356995	no data	no data	no data	no data	no data	no data	no data	16.52705596	no data	no data	no data	no data
170	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.0794834	no data	no data	no data	no data	no data	no data	no data	15.07414289	no data	no data	no data	no data
170	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.08088358	no data	no data	no data	no data	no data	no data	no data	14.73594097	no data	no data	no data	no data
170	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.0767713	no data	no data	no data	no data	no data	no data	no data	13.2808291	no data	no data	no data	no data
170	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0.079106	no data	no data	no data	no data	no data	no data	no data	13.64131454	no data	no data	no data	no data
204	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	0.045495527	no data	no data	no data	no data
204	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	0.044333881	no data	no data	no data	no data
204	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	0.050975967	no data	no data	no data	no data
204	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	0.055950493	no data	no data	no data	no data
204	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	0.0657095	no data	no data	no data	no data
204	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	0.074469499	no data	no data	no data	no data
204	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	0.08143595	no data	no data	no data	no data
204	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	0.077880708	no data	no data	no data	no data
204	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	0.071443986	no data	no data	no data	no data
204	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	0.069587241	no data	no data	no data	no data
204	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	0.054442082	no data	no data	no data	no data
204	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	0.045357933	no data	no data	no data	no data
205	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	7.969281436	no data	no data	no data	no data
205	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	7.692458375	no data	no data	no data	no data
205	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	8.840981131	no data	no data	no data	no data
205	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	9.68596382	no data	no data	no data	no data
205	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	11.33907299	no data	no data	no data	no data
205	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	12.77174888	no data	no data	no data	no data
205	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	13.96129234	no data	no data	no data	no data
205	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	13.38352868	no data	no data	no data	no data
205	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	12.29800225	no data	no data	no data	no data
205	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	12.02739823	no data	no data	no data	no data
205	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	9.470077722	no data	no data	no data	no data
205	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	7.935293588	no data	no data	no data	no data
241	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	4.821507953	no data	no data	no data	no data
241	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	4.483122661	no data	no data	no data	no data
241	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.04526288	no data	no data	no data	no data
241	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.209367638	no data	no data	no data	no data
241	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	6.028178889	no data	no data	no data	no data
241	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	6.120864832	no data	no data	no data	no data
241	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	6.536974457	no data	no data	no data	no data
241	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	6.191656221	no data	no data	no data	no data
241	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.582425423	no data	no data	no data	no data
241	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.394917927	no data	no data	no data	no data
241	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	4.787578529	no data	no data	no data	no data
241	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	4.912988065	no data	no data	no data	no data
501	no data	no data	no data	no data	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	220.8057463	no data	no data	no data	no data	0.42687879	no data	no data	no data	no data	no data	no data	no data	0.000568234	no data	no data	no data	no data
501	no data	no data	no data	no data	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	215.4949419	no data	no data	no data	no data	0.43651237	no data	no data	no data	no data	no data	no data	no data	0.000574673	no data	no data	no data	no data
501	no data	no data	no data	no data	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	244.413457	no data	no data	no data	no data	0.50905207	no data	no data	no data	no data	no data	no data	no data	0.000665776	no data	no data	no data	no data
501	no data	no data	no data	no data	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	252.32219	no data	no data	no data	no data	0.57575247	no data	no data	no data	no data	no data	no data	no data	0.000736934	no data	no data	no data	no data
501	no data	no data	no data	no data	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	281.2184245	no data	no data	no data	no data	0.70320048	no data	no data	no data	no data	no data	no data	no data	0.000880817	no data	no data	no data	no data
501	no data	no data	no data	no data	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	299.4399707	no data	no data	no data	no data	0.83597038	no data	no data	no data	no data	no data	no data	no data	0.001020278	no data	no data	no data	no data
501	no data	no data	no data	no data	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	317.7660221	no data	no data	no data	no data	0.92456462	no data	no data	no data	no data	no data	no data	no data	0.001117478	no data	no data	no data	no data
501	no data	no data	no data	no data	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	307.7048874	no data	no data	no data	no data	0.86830809	no data	no data	no data	no data	no data	no data	no data	0.001057072	no data	no data	no data	no data
501	no data	no data	no data	no data	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	287.7847655	no data	no data	no data	no data	0.78190466	no data	no data	no data	no data	no data	no data	no data	0.000960418	no data	no data	no data	no data
501	no data	no data	no data	no data	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	283.9063886	no data	no data	no data	no data	0.74142466	no data	no data	no data	no data	no data	no data	no data	0.000919234	no data	no data	no data	no data
501	no data	no data	no data	no data	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	242.140009	no data	no data	no data	no data	0.54387901	no data	no data	no data	no data	no data	no data	no data	0.000698735	no data	no data	no data	no data
501	no data	no data	no data	no data	0	[illegible]	no data	no data	no data	no data	no data	no data	no data	no data	no data	222.0459394	no data	no data	no data	no data	0.42780114	no data	no data	no data	no data	no data	no data	no data	0.000569926	no data	no data	no data	no data
1001	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	16.52370487	no data	no data	no data	no data
1001	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	15.05416575	no data	no data	no data	no data
1001	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	16.74841864	no data	no data	no data	no data
1001	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	16.53933812	no data	no data	no data	no data
1001	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	17.74904366	no data	no data	no data	no data
1001	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	17.4630778	no data	no data	no data	no data
1001	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	18.2603402	no data	no data	no data	no data
1001	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	17.90718493	no data	no data	no data	no data
1001	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	16.91120384	no data	no data	no data	no data
1001	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	17.0943604	no data	no data	no data	no data
1001	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	16.10852234	no data	no data	no data	no data
1001	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	16.6177622	no data	no data	no data	no data
1003	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	13.58120865	no data	no data	no data	no data
1003	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	12.40579959	no data	no data	no data	no data
1003	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	13.82385262	no data	no data	no data	no data
1003	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	13.73181449	no data	no data	no data	no data
1003	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	14.88628468	no data	no data	no data	no data
1003	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	14.71873852	no data	no data	no data	no data
1003	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	15.43909497	no data	no data	no data	no data
1003	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	15.06645629	no data	no data	no data	no data
1003	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	14.13857916	no data	no data	no data	no data
1003	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	14.20663098	no data	no data	no data	no data
1003	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	13.2775952	no data	no data	no data	no data
1003	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	13.6795345	no data	no data	no data	no data
1004	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.099182057	no data	no data	no data	no data
1004	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	4.626042126	no data	no data	no data	no data
1004	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.135567548	no data	no data	no data	no data
1004	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.019091212	no data	no data	no data	no data
1004	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.244319169	no data	no data	no data	no data
1004	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.153966923	no data	no data	no data	no data
1004	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.359890213	no data	no data	no data	no data
1004	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.334673693	no data	no data	no data	no data
1004	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.133875127	no data	no data	no data	no data
1004	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.275627341	no data	no data	no data	no data
1004	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.01065163	no data	no data	no data	no data
1004	no data	no data	no data	no data	[illegible]	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	5.097506889	no data	no data	no data	no data

Appendix C, Table C.6: TankESP Output Report for Tables C.4 and C.5
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

																	Xylene				
Tank ID	Trichloropropane (1,2,3)	Tridecane (n-)	Triethanolamine (TEA)	Trifluoroethane (1,1,2-trichloro-1,2,2)	Trimethylbenzene (1,2,3)	Trimethylbenzene (1,2,4)	Trimethylbenzene (1,3,5)	Trimethylchlorosilane (chlorotrimethylsilane)	Trimethylcyclohexane (1,1,3)	Trimethylcyclopentane (1,1,3)	Trimethylpentane (2,2,3)	Trimethylpentane (2,3,4)	Trimethylpentane (2,3,3)	Undecane (n-)	Vinyl acetate (acetic acid ethenyl ester)	Vinylidene chloride (1,1-dichloro ethene)	Xylene	Xylene (m-)	Xylene (o-)	Xylene (p-)	Zinc compounds
167	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	6.549034965	no data	no data	no data	0
167	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.966850016	no data	no data	no data	0
167	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	6.640735938	no data	no data	no data	0
167	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	6.56110729	no data	no data	no data	0
167	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	7.046761415	no data	no data	no data	0
167	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	6.952917998	no data	no data	no data	0
167	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	7.27874181	no data	no data	no data	0
167	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	7.131689126	no data	no data	no data	0
167	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	6.729700425	no data	no data	no data	0
167	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	6.799057904	no data	no data	no data	0
167	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	6.394908826	no data	no data	no data	0
167	no data	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	6.58316428	no data	no data	no data	0
170	no data	no data	no data	no data	no data	2.671543208	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	12.08364775	no data	no data	no data	0
170	no data	no data	no data	no data	no data	2.417679818	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	10.99927143	no data	no data	no data	0
170	no data	no data	no data	no data	no data	2.680061117	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	12.23490599	no data	no data	no data	0
170	no data	no data	no data	no data	no data	2.606139895	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	12.06191229	no data	no data	no data	0
170	no data	no data	no data	no data	no data	2.718130561	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	12.90318399	no data	no data	no data	0
170	no data	no data	no data	no data	no data	2.644566345	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	12.7073718	no data	no data	no data	0
170	no data	no data	no data	no data	no data	2.742263805	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	13.28589968	no data	no data	no data	0
170	no data	no data	no data	no data	no data	2.727917945	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	13.04403597	no data	no data	no data	0
170	no data	no data	no data	no data	no data	2.62343666	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	12.34049817	no data	no data	no data	0
170	no data	no data	no data	no data	no data	2.69626506	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	12.49697424	no data	no data	no data	0
170	no data	no data	no data	no data	no data	2.591359297	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	11.78883971	no data	no data	no data	0
170	no data	no data	no data	no data	no data	2.674374644	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	12.13963997	no data	no data	no data	0
204	no data	no data	no data	no data	no data	0.003439336	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.046351226	no data	no data	no data	0
204	no data	no data	no data	no data	no data	0.003417703	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.045571222	no data	no data	no data	0
204	no data	no data	no data	no data	no data	0.003974973	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.05267212	no data	no data	no data	0
204	no data	no data	no data	no data	no data	0.004532774	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.0588254	no data	no data	no data	0
204	no data	no data	no data	no data	no data	0.005529574	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.070290171	no data	no data	no data	0
204	no data	no data	no data	no data	no data	0.006560779	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.081339409	no data	no data	no data	0
204	no data	no data	no data	no data	no data	0.007298631	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.089644977	no data	no data	no data	0
204	no data	no data	no data	no data	no data	0.006892687	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.08524201	no data	no data	no data	0
204	no data	no data	no data	no data	no data	0.006225206	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.07764445	no data	no data	no data	0
204	no data	no data	no data	no data	no data	0.005965085	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.075066293	no data	no data	no data	0
204	no data	no data	no data	no data	no data	0.00438309	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.057077004	no data	no data	no data	0
204	no data	no data	no data	no data	no data	0.003423789	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.046179496	no data	no data	no data	0
205	no data	no data	no data	no data	no data	0.061437059	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.369703065	no data	no data	no data	0
205	no data	no data	no data	no data	no data	0.060480061	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.307926476	no data	no data	no data	0
205	no data	no data	no data	no data	no data	0.070332023	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.666731342	no data	no data	no data	0
205	no data	no data	no data	no data	no data	0.080061309	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.972922199	no data	no data	no data	0
205	no data	no data	no data	no data	no data	0.097386491	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.541493663	no data	no data	no data	0
205	no data	no data	no data	no data	no data	0.114838206	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.073015463	no data	no data	no data	0
205	no data	no data	no data	no data	no data	0.127706054	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.48723935	no data	no data	no data	0
205	no data	no data	no data	no data	no data	0.12087235	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.276708141	no data	no data	no data	0
205	no data	no data	no data	no data	no data	0.109328855	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.901715563	no data	no data	no data	0
205	no data	no data	no data	no data	no data	0.105172308	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	3.787317953	no data	no data	no data	0
205	no data	no data	no data	no data	no data	0.077753973	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.897813619	no data	no data	no data	0
205	no data	no data	no data	no data	no data	0.061087376	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	2.358058245	no data	no data	no data	0
241	no data	no data	no data	no data	no data	1.602244158	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.864719381	no data	no data	no data	0
241	no data	no data	no data	no data	no data	1.450794164	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.437504672	no data	no data	no data	0
241	no data	no data	no data	no data	no data	1.608843482	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.942529071	no data	no data	no data	0
241	no data	no data	no data	no data	no data	1.566624385	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.896780912	no data	no data	no data	0
241	no data	no data	no data	no data	no data	1.638340684	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.286293246	no data	no data	no data	0
241	no data	no data	no data	no data	no data	1.596368839	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.228476841	no data	no data	no data	0
241	no data	no data	no data	no data	no data	1.656958562	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.482264094	no data	no data	no data	0
241	no data	no data	no data	no data	no data	1.645806984	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.357469608	no data	no data	no data	0
241	no data	no data	no data	no data	no data	1.579916087	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.038888998	no data	no data	no data	0
241	no data	no data	no data	no data	no data	1.621251962	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.075730949	no data	no data	no data	0
241	no data	no data	no data	no data	no data	1.555133071	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.755869211	no data	no data	no data	0
241	no data	no data	no data	no data	no data	1.604442227	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	4.893572529	no data	no data	no data	0
501	no data	no data	no data	no data	no data	0.092875627	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000220785	no data	no data	no data	0
501	no data	no data	no data	no data	no data	0.095790188	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000225289	no data	no data	no data	0
501	no data	no data	no data	no data	no data	0.112280086	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000262395	no data	no data	no data	0
501	no data	no data	no data	no data	no data	0.129128551	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000295539	no data	no data	no data	0
501	no data	no data	no data	no data	no data	0.160357342	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000359439	no data	no data	no data	0
501	no data	no data	no data	no data	no data	0.194462729	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000425123	no data	no data	no data	0
501	no data	no data	no data	no data	no data	0.216673669	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.00046927	no data	no data	no data	0
501	no data	no data	no data	no data	no data	0.202374957	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000441348	no data	no data	no data	0
501	no data	no data	no data	no data	no data	0.180999009	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000398132	no data	no data	no data	0
501	no data	no data	no data	no data	no data	0.170407095	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000378216	no data	no data	no data	0
501	no data	no data	no data	no data	no data	0.121630023	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.00027938	no data	no data	no data	0
501	no data	no data	no data	no data	no data	0.093017292	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.000221297	no data	no data	no data	0
1001	no data	no data	no data	no data	no data	6.394673969	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	18.7063673	no data	no data	no data	0
1001	no data	no data	no data	no data	no data	5.779469805	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	16.94004017	no data	no data	no data	0
1001	no data	no data	no data	no data	no data	6.401289541	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	18.78443969	no data	no data	no data	0
1001	no data	no data	no data	no data	no data	6.20458255	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	18.29356425	no data	no data	no data	0
1001	no data	no data	no data	no data	no data	6.431251093	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	19.13401725	no data	no data	no data	0
1001	no data	no data	no data	no data	no data	6.234668519	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	18.62939563	no data	no data	no data	0
1001	no data	no data	no data	no data	no data	6.44996246	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	19.3309658	no data	no data	no data	0
1001	no data	no data	no data	no data	no data	6.438584467	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	19.20348247	no data	no data	no data	0
1001	no data	no data	no data	no data	no data	6.217841445	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	18.4352744	no data	no data	no data	0
1001	no data	no data	no data	no data	no data	6.413588226	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	18.91635403	no data	no data	no data	0
1001	no data	no data	no data	no data	no data	6.192865941	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	18.14975528	no data	no data	no data	0
1001	no data	no data	no data	no data	no data	6.396932971	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	18.73602737	no data	no data	no data	0
1003	no data	no data	no data	no data	no data	5.154476427	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	15.14676774	no data	no data	no data	0
1003	no data	no data	no data	no data	no data	4.659565555	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	13.72816559	no data	no data	no data	0
1003	no data	no data	no data	no data	no data	5.161636246	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	15.2311666	no data	no data	no data	0
1003	no data	no data	no data	no data	no data	5.005617751	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	14.86296776	no data	no data	no data	0
1003	no data	no data	no data	no data	no data	5.193533073	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	15.6028201	no data	no data	no data	0
1003	no data	no data	no data	no data	no data	5.037833082	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	15.22216875	no data	no data	no data	0
1003	no data	no data	no data	no data	no data	5.213753797	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	15.81570539	no data	no data	no data	0
1003	no data	no data	no data	no data	no data	5.201716785	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	15.68101946	no data	no data	no data	0
1003	no data	no data	no data	no data	no data	5.020102541	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	15.01787379	no data	no data	no data	0
1003	no data	no data	no data	no data	no data	5.175205918	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	15.37690726	no data	no data	no data	0
1003	no data	no data	no data	no data	no data	4.993239922	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	14.71120428	no data	no data	no data	0
1003	no data	no data	no data	no data	no data	5.156838542	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	15.17777742	no data	no data	no data	0
1004	no data	no data	no data	no data	no data	1.962013871	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.746887392	no data	no data	no data	0
1004	no data	no data	no data	no data	no data	1.77276955	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.197984207	no data	no data	no data	0
1004	no data	no data	no data	no data	no data	1.963144281	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.759891955	no data	no data	no data	0
1004	no data	no data	no data	no data	no data	1.901397415	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.591938437	no data	no data	no data	0
1004	no data	no data	no data	no data	no data	1.966708269	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.799710047	no data	no data	no data	0
1004	no data	no data	no data	no data	no data	1.906002825	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.642247352	no data	no data	no data	0
1004	no data	no data	no data	no data	no data	1.970757039	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.84332289	no data	no data	no data	0
1004	no data	no data	no data	no data	no data	1.969852968	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.833706512	no data	no data	no data	0
1004	no data	no data	no data	no data	no data	1.905293801	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.634639994	no data	no data	no data	0
1004	no data	no data	no data	no data	no data	1.967780459	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.811404392	no data	no data	no data	0
1004	no data	no data	no data	no data	no data	1.901122151	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.588854883	no data	no data	no data	0
1004	no data	no data	no data	no data	no data	1.961962654	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.746292988	no data	no data	no data	0

Appendix C, Table C-7

Potential to Emit (PTE) POC Emissions for Altered and Exempt Storage Tanks (Post-Project, for Renewable-Based Scenario)
(Emissions below are NOT imposed as permit condition limits)
Phillips 66 Company - San Francisco Refinery, Rodeo, CA

Source #	Post-Project Status[1]	Tank Number		POC Emissions[1]						
			Period	Roof Type	Vapor Control Efficiency	Stock	Avg. TVP (psia)	Throughput (bbl/yr)	POC Emissions (lb/yr)	POC Emissions (ton/yr)
90	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 67	NA[3]	FixedRoof	0%	Renewable Feedstock	0.0001	243,333	5.83	0.003
97	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 100[6]	NA[3]	FixedRoof	10 ppmv	Renewable Feedstock	0.0001	15,571,000	632.73	0.316
99	Exempt per: 2-1-123.3.2	Tank 102	NA[3]	EFRT	0%	Renewable Diesel	0.0066	500,000	38.06	0.019
103	Exempt per: 2-1-123.3.2	Tank 106	NA[3]	EFRT	0%	Renewable Diesel	0.0065	3,129,000	266.47	0.133
105	Exempt per: 2-1-123.3.2	Tank 129	NA[3]	EFRT	0%	Renewable Diesel	0.0066	7,300,000	564.25	0.282
108	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 153	NA[3]	FixedRoof	0%	Renewable Feedstock	0.0001	7,300,000	139.93	0.070
110	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 155	NA[3]	EFRT	0%	Renewable Feedstocks	0.0001	9,136,680	742.73	0.371
111	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 156	NA[3]	EFRT	0%	Renewable Feedstocks	0.0001	13,140,000	1,068.10	0.534
112	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 157	NA[3]	EFRT	0%	Renewable Feedstocks	0.0001	13,140,000	1,068.10	0.534
113	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 158	NA[3]	EFRT	0%	Renewable Feedstocks	0.0001	13,140,000	1,068.09	0.534
114	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 159	NA[3]	EFRT	0%	Renewable Feedstocks	0.0001	13,140,000	925.74	0.463
122	Altered	Tank 167	NA[3]	EFRT	0%	Renewable Naphtha	5.8805	2,000,000	3,715.39	1.858
125	Altered	Tank 170	NA	EFRT	0%	Renewable Naphtha	5.6973	3,000,000	3,563.22	1.782
126	Altered	Tank 172	NA[3]	IFRT	0%	Renewable Naphtha	5.5756	594,845	788.05	0.394
127	Exempt per: 2-1-123.3.2	Tank 173	NA[3]	EFRT	0%	Renewable Diesel	0.0065	7,300,000	614.56	0.307
135	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 200	NA[3]	FixedRoof	98%	Renewable Feedstocks	0.0001	10,000,000	2.42	0.001
137	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 202	NA[3]	FixedRoof	98%	Renewable Feedstocks	0.0001	10,000,000	2.87	0.001
139	Altered	Tank 204	Jul 2021 - Jun 2022	FixedRoof	98%	RR Slop Oil	2.5530	962,972	3,255.40	1.628
140	Altered	Tank 205	Sep 2015 - Aug 2016	FixedRoof	98%	RR Slop Oil	6.0208	630,575	5,245.87	2.623
150	Altered	Tank 241	Jun 2018 - May 2019	EFRT	0%	Renewable Naphtha	5.6013	519,471	3,549.03	1.775
173	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 280	NA[3]	FixedRoof	98%	Renewable Feedstocks	0.0001	28,800,000	5.73	0.003
174	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 281	NA[3]	FixedRoof	98%	Renewable Feedstocks	0.0001	28,800,000	5.73	0.003
175	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 284	NA[3]	FixedRoof	98%	Renewable Feedstocks	0.0001	28,800,000	5.73	0.003
195	Altered	Tank 501	Mar 2021 - Feb 2022	FixedRoof	0%	Water treatment sludge	0.1961	97,928	1,912.24	0.956
204	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 528	NA[3]	FixedRoof	0%	Renewable Feedstock	0.0001	691,686	19.71	0.010
205	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 529	NA[3]	FixedRoof	0%	Renewable Feedstock	0.0001	691,686	19.71	0.010
254	Altered	Tank 1001	Apr 2007 - Mar 2008	EFRT	0%	Renewable Diesel	0.0068	7,257,233	518.78	0.259
256	Altered	Tank 1003	Jun 2009 - May 2010	EFRT	0%	Renewable Jet	0.0095	4,024,700	316.11	0.158
257	Altered	Tank 1004	Sep 2020 - Aug 2021	IFRT	0%	Renewable Diesel	0.0062	3,568,973	253.68	0.127
261	Exempt per: 2-1-123.3.2	Tank 1010	NA[3]	EFRT	0%	Renewable Diesel	0.0068	33,375,600	2,363.60	1.182
262	Exempt per: 2-1-123.3.2	Tank 1011	NA[3]	EFRT	0%	Renewable Diesel	0.0066	500,000	41.68	0.021
263	Exempt per: 2-1-123.3.2	Tank 1012	NA[3]	EFRT	0%	Renewable Diesel	0.0066	500,000	41.68	0.021
334	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 107	NA[3]	EFRT	0%	Renewable Feedstocks	0.0001	18,264,600	1,198.81	0.599
340	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 108	NA[3]	EFRT	0%	Renewable Feedstocks	0.0001	18,264,600	1,198.81	0.599
341	Altered	Tank 208	NA[3]	EFRT	0%	Renewable Jet	0.0095	1,819,583	158.96	0.079
342	Altered	Tank 209	NA[3]	EFRT	0%	Renewable Jet	0.0095	2,407,700	207.49	0.104
360	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 223	NA[3]	FixedRoof	98%	Renewable Feedstocks	0.0001	2,780,000	1.98	0.001
440	No changes (Not included in Application 31157)[7]	Tank 110	NA[3]	EFRT	0%	Gasoline TVP 10.87	10.8699	3,600,000	10,476.48	5.238
445	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 271	NA[3]	FixedRoof	98%	Renewable Feedstocks	0.0001	28,800,000	6.50	0.003
448	Exempt per: 2-1-123.3.2	Tank 1007	NA[3]	IFRT	0%	Renewable Diesel	0.0062	33,375,600	1,970.35	0.985
449	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 285	NA[3]	FixedRoof	98%	Renewable Feedstocks	0.0001	28,800,000	6.50	0.003
506	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 257	NA[3]	FixedRoof	98%	Renewable Feedstocks	0.0001	5,475,000	2.13	0.001
32120	Exempt per: 2-1-123.3.2 2-1-123.3.6	Tank 224	NA[3]	FixedRoof	0%	Renewable Feedstock	0.0001	3,500,000	119.28	0.060

Notes:

1. Tank parameters, stock properties, and meteorological data used to calculate these emissions are available in the TankESP database and TanksESP Output Report.
2. Tanks 200 (S-135), 202 (S-137), 204 (S-139), 205 (S-140), 280 (S-173), 281 (S-174), 284 (S-175), 223 (S-360), 271 (S-445), 285 (S-449), and 257 (S-506) are on on vapor recovery to the fuel gas
3. Throughputs for Tanks 167 (S-122), 172 (S-126), 208 (S-341), 209 (S-342), and 110 (S-440) are based on permit condition limits and are thus modeled on a representative 12-month period. Tanks
4. Regulation 2-1-123.3.2: storage of organic liquids with an initial boiling point greater than 302F and exceeds storage temperature by at least 180°F

   Regulation 2-1-123.3.6: storage of tallow or vegetable oils
5. Renewable Diesel and Renewable Feedstock contain no TACs.
6. See Appendix C, Table C-10 for emissions calculations for S-97.
7. The emissions for S-440 were included in the HRA. However, Phillips 66 later withdrew their requests for changes to S-440. S-440 is no longer part of the Rodeo Renewed Project. The HRA results remain valid since the HRA results represent a more conservative estimate with the inclusion of S-440.

Appendix C, Table C-8
Potential to Emit (PTE) TAC Emissions for Altered and Exempt Storage Tanks (Post-Project, for Renewable-Based Scenario)
Phillips 66 Company - San Francisco Refinery, Rodeo, CA

Source #	Tank Number	Stock	TAC Emissions (lb/yr)[1]										
			Benzene	Cresol	Ethyl benzene	Hexane (n-)	Hydrogen sulfide	Naph thalene	Phenol	Propyl ene	Styrene	Toluene	Xylene (total)
90	Tank 67	Renewable Feedstock	--	--	--	--	--	--	--	--	--	--	--
97	Tank 100	Renewable Feedstock	--	--	--	--	--	--	--	--	--	--	--
99	Tank 102	Renewable Diesel	--	--	--	--	--	--	--	--	--	--	--
103	Tank 106	Renewable Diesel	--	--	--	--	--	--	--	--	--	--	--
105	Tank 129	Renewable Diesel	--	--	--	--	--	--	--	--	--	--	--
108	Tank 153	Renewable Feedstock	--	--	--	--	--	--	--	--	--	--	--
110	Tank 155	Renewable Feedstocks	--	--	--	--	--	--	--	--	--	--	--
111	Tank 156	Renewable Feedstocks	--	--	--	--	--	--	--	--	--	--	--
112	Tank 157	Renewable Feedstocks	--	--	--	--	--	--	--	--	--	--	--
113	Tank 158	Renewable Feedstocks	--	--	--	--	--	--	--	--	--	--	--
114	Tank 159	Renewable Feedstocks	--	--	--	--	--	--	--	--	--	--	--
122	Tank 167	Renewable Naphtha	0.01	--	0.02	82.6	--	0.00	--	--	--	0.10	0.02
125	Tank 170	Renewable Naphtha	0.01	--	0.03	84.6	--	0.00	--	--	--	0.11	0.02
126	Tank 172	Renewable Naphtha	0.00	--	0.01	17.6	--	0.00	--	--	--	0.02	0.00
127	Tank 173	Renewable Diesel	--	--	--	--	--	--	--	--	--	--	--
135	Tank 200	Renewable Feedstocks	--	--	--	--	--	--	--	--	--	--	--
137	Tank 202	Renewable Feedstocks	--	--	--	--	--	--	--	--	--	--	--
139	Tank 204	RR Slop Oil	0.03	--	0.02	206.2	--	0.00	--	--	--	0.17	0.02
140	Tank 205	RR Slop Oil	0.02	--	0.01	117.8	--	0.00	--	--	--	0.10	0.01
150	Tank 241	Renewable Naphtha	0.01	--	0.01	81.4	--	0.00	--	--	--	0.07	0.01
173	Tank 280	Renewable Feedstocks	--	--	--	--	--	--	--	--	--	--	--
174	Tank 281	Renewable Feedstocks	--	--	--	--	--	--	--	--	--	--	--
175	Tank 284	Renewable Feedstocks	--	--	--	--	--	--	--	--	--	--	--
195	Tank 501	Water treatment sludge	0.01	0.32	0.00	349.4	--	0.05	0.04	2,435.84	5.95	0.01	0.00
204	Tank 528	Renewable Feedstock	--	--	--	--	--	--	--	--	--	--	--
205	Tank 529	Renewable Feedstock	--	--	--	--	--	--	--	--	--	--	--
254	Tank 1001	Renewable Diesel	--	--	--	--	--	--	--	--	--	--	--
256	Tank 1003	Renewable Jet	--	--	--	--	--	--	--	--	--	--	--
257	Tank 1004	Renewable Diesel	--	--	--	--	--	--	--	--	--	--	--
261	Tank 1010	Renewable Diesel	--	--	--	--	--	--	--	--	--	--	--
262	Tank 1011	Renewable Diesel	--	--	--	--	--	--	--	--	--	--	--
263	Tank 1012	Renewable Diesel	--	--	--	--	--	--	--	--	--	--	--
334	Tank 107	Renewable Feedstocks	--	--	--	--	--	--	--	--	--	--	--
340	Tank 108	Renewable Feedstocks	--	--	--	--	--	--	--	--	--	--	--
341	Tank 208	Renewable Jet	--	--	--	--	--	--	--	--	--	--	--
342	Tank 209	Renewable Jet	--	--	--	--	--	--	--	--	--	--	--
360	Tank 223	Renewable Feedstocks	--	--	--	--	--	--	--	--	--	--	--
440	Tank 110	Gasoline TVP 10.87	8.94	--	4.31	39.2	--	0.07	--	--	--	42.79	23.49
445	Tank 271	Renewable Feedstocks	--	--	--	--	--	--	--	--	--	--	--
448	Tank 1007	Renewable Diesel	--	--	--	--	--	--	--	--	--	--	--
449	Tank 285	Renewable Feedstocks	--	--	--	--	--	--	--	--	--	--	--
506	Tank 257	Renewable Feedstocks	--	--	--	--	--	--	--	--	--	--	--
32120	Tank 224	Renewable Feedstock	--	--	--	--	--	--	--	--	--	--	--

Notes:

1. TAC emissions are calculated using TanksESP and are presented in TankESP Output Report.
2. Renewable Diesel and Renewable Feedstock contain no TACs.
3. The emissions for S-440 were included in the HRA. However, Phillips 66 later withdrew their requests for changes to S-440. S-440 is no longer part of the Rodeo Renewed Project. The HRA results remain valid since the HRA results represent a more conservative estimate with the inclusion of S-440.

Appendix C, Table C-9: TankESP Output Report for Tables C-7 and C-8
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	Atmospheric Pressure (psia)	Avg. Ambient Temp. (degF)	Avg. height of vapor space (ft)	Avg. Liquid Height (ft)	Avg. Liquid Surface Temp. (degF)	Avg. TVP (psia)	Avg. wind speed	Bulk Liquid Temperature (degF)
107	14.7465	59.98184932	28	28	65.00694739	0.000100034	5.289589041	62.09551582
108	14.7465	59.98184932	28	28	65.00694739	0.000100034	5.289589041	62.09551582
110	14.7465	59.98184932	25.5	25.5	65.03142584	10.869927	5.289589041	62.13048513
170	14.7465	59.98184932	24	24	64.91945056	5.6973434	5.289589041	61.97052003
172	14.7465	59.98184932	60.666667	24	62.46229314	5.575611867	5.289589041	61.16369315
200	14.7465	59.98184932	25.09375	24	62.56187904	0.000100034	5.289589041	61.16369315
1001	14.7465	59.98184932	24	24	64.98355414	0.006817678	5.289589041	62.06209704
1003	14.7465	59.98184932	24	24	64.98355414	0.009539447	5.289589041	62.06209704
1004	14.7465	59.98184932	67.333333	24	62.50631783	0.00618052	5.289589041	61.16369315
1007	14.7465	59.98184932	31.822917	30	62.52500627	0.006185091	5.289589041	61.16369315
1010	14.7465	59.98184932	24	24	64.98355414	0.006817678	5.289589041	62.06209704
155	14.7465	59.98184932	24	24	64.98355414	0.000100034	5.289589041	62.06209704
156	14.7465	59.98184932	24	24	64.98355414	0.000100034	5.289589041	62.06209704
157	14.7465	59.98184932	24	24	64.98355414	0.000100034	5.289589041	62.06209704
159	14.7465	59.98184932	24	24	65.03991888	0.000100034	5.289589041	62.14261818
167	14.7465	59.98184932	24	24	64.91945056	5.8804971	5.289589041	61.97052003
202	14.7465	59.98184932	25.25	24	62.59919415	0.000100034	5.289589041	61.16369315
158	14.7465	59.98184932	24	24	64.98355414	0.000100034	5.289589041	62.06209704
204	14.7465	59.98184932	29.09375	28	62.51687449	2.552989454	5.289589041	61.16369315
205	14.7465	59.98184932	21.041667	20	62.59919415	6.020771724	5.289589041	61.16369315
208	14.7465	59.98184932	28	28	64.89436958	0.009506546	5.289589041	61.93469041
223	14.7465	59.98184932	29.25	28	62.55597157	0.000100034	5.289589041	61.16369315
241	14.7465	59.98184932	21	21	65.00449708	5.6013072	5.289589041	62.09201544
257	14.7465	59.98184932	25.145833	24	62.5750686	0.000100034	5.289589041	61.16369315
209	14.7465	59.98184932	28	28	64.89436958	0.009506546	5.289589041	61.93469041
271	14.7465	59.98184932	31.5625	30	62.59919415	0.000100034	5.289589041	61.16369315
280	14.7465	59.98184932	25.5625	24	62.65748799	0.000100034	5.289589041	61.16369315
281	14.7465	59.98184932	25.5625	24	62.65748799	0.000100034	5.289589041	61.16369315
285	14.7465	59.98184932	31.5625	30	62.59919415	0.000100034	5.289589041	61.16369315
501	14.7465	59.98184932	7.8645833	7.5	62.58012412	0.196101259	5.289589041	61.16369315
284	14.7465	59.98184932	25.5625	24	62.65748799	0.000100034	5.289589041	61.16369315
67	14.7456	59.98184932	28.833333	28	158	0.000100034	5.289589041	158
1011	14.7456	59.98184932	24	24	64.01074509	6.56E-03	5.289589041	62.9062234
1012	14.7456	59.98184932	24	24	64.01074509	6.56E-03	5.289589041	62.9062234
102	14.7456	59.98184932	28	28	64.00572585	6.56E-03	5.289589041	62.88949274
129	14.7456	59.98184932	20	20	64.03974415	6.57E-03	5.289589041	63.00288712
153	14.7456	59.98184932	25.5625	24	130	0.000100034	5.289589041	130
173	14.7456	59.98184932	24	24	63.96375392	6.55E-03	5.289589041	62.74958629
106	14.7456	59.98184932	24	24	63.96375392	6.55E-03	5.289589041	62.74958629
224	14.7456	59.98184932	29.25	28	62.55597157	0.000100034	5.289589041	61.16369315
528	14.7456	59.98184932	20.9375	20	59.981849	0.000100034	5.289589041	59.981849
529	14.7456	59.98184932	20.9375	20	59.981849	0.000100034	5.289589041	59.981849

Tank ID	Cleaning loss (w/out control) (lbs)	Clingage Factor	Comments	Deck Fitting (w/o GP) Loss (lbs)	Deck fitting Emission Factor	Deck Seam Loss (lbs)	Delta Tv	Effective Antoines B	Effective CDB Height (ft)
107	0	0.0015		0.048461999		0	0	0	0
108	0	0.0015		0.049612389		0	0	0	0
110	0	0.0015		1434.53561		0	0	0	0
170	0	0.0015		643.479039		0	0	0	0
172	0	0.0015		234.613935	40.63	0	0	0	0
200	0	0.0015		0	0	0		0	0
1001	0	0.0015		0.835783116		0	0	0	0
1003	0	0.0015		1.930469734		0	0	0	0
1004	0	0.0015		0.750293293	69.07	0	0	0	0
1007	0	0.0015		9.30318391	696.33	0	0	0	0
1010	0	0.0015		1.284868548		0	0	0	0
155	0	0.0015		0.026546647		0	0	0	0
156	0	0.0015		0.03977851		0	0	0	0
157	0	0.0015		0.039397512		0	0	0	0
159	0	0.0015		0.044367653		0	0	0	0
167	0	0.0015		654.317822		0	0	0	0
202	0	0.0015		0	0	0		0	0
158	0	0.0015		0.03862812		0	0	0	0
204	0	0.0015		0	0	0		0	0
205	0	0.0015		0	0	0		0	0
208	0	0.0015		1.758504259		0	0	0	0
223	0	0.0015		0	0	0		0	0
241	0	0.0015		646.017852		0	0	0	0
257	0	0.0015		0	0	0		0	0
209	0	0.0015		1.758504259		0	0	0	0
271	0	0.0015		0	0	0		0	0
280	0	0.0015		0	0	0		0	0
281	0	0.0015		0	0	0		0	0
285	0	0.0015		0	0	0		0	0
501	0	0.0015		0	0	0		0	0
284	0	0.0015		0	0	0		0	0
67	0	0.0015		0	0	0	0	0	0
1011	0	0.0015		1.129184646		0	0	0	0
1012	0	0.0015		1.129184646		0	0	0	0
102	0	0.0015		1.294233936		0	0	0	0
129	0	0.0015		0.917357361		0	0	0	0
153	0	0.0015		0	0	0	0	0	0
173	0	0.0015		0.852998424		0	0	0	0
106	0	0.0015		0.852998424		0	0	0	0
224	0	0.0015		0	0	0		0	0
528	0	0.0015		0	0	0	0	0	0
529	0	0.0015		0	0	0	0	0	0

Appendix C, Table C-9: TankESP Output Report for Tables C-7 and C-8
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	Effective Column Diameter (ft)	Effective height of liquid heel (ft)	Effective Roof Height (ft)	Effective sump height (ft)	Effective wind speed	Estimated cleaning losses (lbs)	Estimated heating cycle Losses (lbs)	Estimated standing losses (lbs)	Estimated working losses (lbs)	Extrapolated Annual Throughput (bbl)	Flash Gas Abbreviation	Flash Gas Emissions (lbs)	Flash Gas Molecular Wt
107	1	-1	0	0		0	0	0.254891264	1198.554155	102537460		0	0
108	1	-1	0	0		0	0	0.256041653	1198.554155	102537460		0	0
110	1	-1	0	0		0	0	10293.68778	182.796924	20210400		0	0
170	1	-1	0	0		0	0	3349.11404	214.103866	16842000		0	0
172	1	-1	36.666667	0	0	0	0	745.601854	42.4528711	3339459.8		0	0
200	0	-1	1.09375	0	0	0	0	0.26612854	2.15145836	56140000		0	0
1001	1	-1	0	0		0	0	6.29702919	512.478134	40742103.44		0	0
1003	1	-1	0	0		0	0	9.56748773	306.542802	22594664.38		0	0
1004	1	-1	43.333333	0	0	0	0	1.649500801	252.02729	20036214.87		0	0
1007	1.1	-1	1.8229167	0	0	0	0	10.44847634	1959.90519	187370620		0	0
1010	1	-1	0	0		0	0	6.74611462	2356.85777	187370620		0	0
155	1	-1	0	0		0	0	0.195472405	742.537583	51293322		0	0
156	1	-1	0	0		0	0	0.208704267	1067.887221	73767960		0	0
157	1	-1	0	0		0	0	0.20832327	1067.887221	73767960		0	0
159	1	-1	0	0		0	0	0.237489222	925.502256	73767960		0	0
167	1	-1	0	0		0	0	3572.65053	142.735912	11228000		0	0
202	0	-1	1.25	0	0	0	0	0.347823854	2.52048144	56140000		0	0
158	1	-1	0	0		0	0	0.207553879	1067.887221	73767960		0	0
204	0	-1	1.09375	0	0	0	0	357.053561	2898.348775	5406122.551		0	0
205	0	-1	1.0416667	0	0	0	0	333.568878	4912.29826	3540045.664		0	0
208	1	-1	0	0		0	0	8.82190878	150.138346	10215139		0	0
223	0	-1	1.25	0	0	0	0	0.405514798	1.57279857	15606920		0	0
241	1	-1	0	0		0	0	3515.04138	33.98409272	2916308.057		0	0
257	0	-1	1.1458333	0	0	0	0	0.292110817	1.84148849	30736650		0	0
209	1	-1	0	0		0	0	8.82190878	198.665346	13516828		0	0
271	0	-1	1.5625	0	0	0	0	0.679320734	5.82518648	161683200		0	0
280	0	-1	1.5625	0	0	0	0	0.545416507	5.18173855	161683200		0	0
281	0	-1	1.5625	0	0	0	0	0.545416507	5.18173855	161683200		0	0
285	0	-1	1.5625	0	0	0	0	0.679320734	5.82518648	161683200		0	0
501	0	-1	0.36458333	0	0	0	0	344.525283	1567.711226	549767.0725		0	0
284	0	-1	1.5625	0	0	0	0	0.545416507	5.18173855	161683200		0	0
67	0	-1	0.83333333	0	0	0	0	0	5.83404824	1366073.3		0	0
1011	1	-1	0	0		0	0	6.37218804	35.3080961	2807000		0	0
1012	1	-1	0	0		0	0	6.37218804	35.3080961	2807000		0	0
102	1	-1	0	0		0	0	7.25037854	30.8057211	2807000		0	0
129	1	-1	0	0		0	0	5.79029038	558.456384	40982200		0	0
153	0	-1	1.5625	0	0	0	0	0	139.932002	40982200		0	0
173	1	-1	0	0		0	0	5.33515758	609.22515	40982200		0	0
106	1	-1	0	0		0	0	5.33515758	261.132256	17566206		0	0
224	0	-1	1.25	0	0	0	0	20.27558863	99.0070927	19649000		0	0
528	0	-1	0.9375	0	0	0	0	0	19.711585	3883126.3		0	0
529	0	-1	0.9375	0	0	0	0	0	19.711585	3883126.3		0	0

Appendix C, Table C-9: TankESP Output Report for Tables C-7 and C-8
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	Floating roof Emission Factor	Floating Roof Kd	Floating Roof Kr	Floating Roof Sd	Floating roof standing storage loss factor	H/D Ratio	Heating cycle Ke	Heating cycle loss (w/out control) (lbs)	Height of cone down bottom (ft)	Height of roof (ft)	Height of vapor space (ft)	Includes a landing loss?	Includes a tank cleaning?	Initial fill?	Is a vapor control device used?	Kb	Kc	Ke	Kf per slotted pole
107		0		0.2		0.34782609	-1	0	0	0	0	N	N	N	N	1	1	0	0
108		0		0.2		0.34782609	-1	0	0	0	0	N	N	N	N	1	1	0	0
110		0		0.2		0.32692308	-1	0	0	0	0	N	N	N	N	1	1	0	0
170		0		0.2		0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0	0
172	84.63	0	0.4	0.2	84.63	0.43636364	-1	0	0	55	0	N	N	N	N	1	1	0	0
200	0	0	0	0	0	0.45714286	-1	0	0	3.28125	25.09375	N	N	N	N	1	1		0
1001		0		0.2		0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0	0
1003		0		0.2		0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0	0
1004	121.07	0	0.4	0.2	121.07	0.36923077	-1	0	0	65	0	N	N	N	N	1	1	0	0
1007	766.33	0	0.4	0.2	766.33	0.34285714	-1	0	0	5.46875	0	N	N	N	N	1	1	0	0
1010		0		0.2		0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0	0
155		0		0.2		0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0	0
156		0		0.2		0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0	0
157		0		0.2		0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0	0
159		0		0.2		0.32	-1	0	0	0	0	N	N	N	N	1	1	0	0
167		0		0.2		0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0	0
202	0	0	0	0	0	0.4	-1	0	0	3.75	25.25	N	N	N	N	1	1		0
158		0		0.2		0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0	0
204	0	0	0	0	0	0.53333333	-1	0	0	3.28125	29.09375	N	N	N	N		1		0
205	0	0	0	0	0	0.4	-1	0	0	3.125	21.041667	N	N	N	N		1		0
208		0		0.2		0.46666667	-1	0	0	0	0	N	N	N	N	1	1	0	0
223	0	0	0	0	0	0.46666667	-1	0	0	3.75	29.25	N	N	N	N	1	1		0
241		0		0.2		0.35	-1	0	0	0	0	N	N	N	N	1	1	0	0
257	0	0	0	0	0	0.43636364	-1	0	0	3.4375	25.145833	N	N	N	N	1	1		0
209		0		0.2		0.46666667	-1	0	0	0	0	N	N	N	N	1	1	0	0
271	0	0	0	0	0	0.4	-1	0	0	4.6875	31.5625	N	N	N	N	1	1		0
280	0	0	0	0	0	0.32	-1	0	0	4.6875	25.5625	N	N	N	N	1	1		0
281	0	0	0	0	0	0.32	-1	0	0	4.6875	25.5625	N	N	N	N	1	1		0
285	0	0	0	0	0	0.4	-1	0	0	4.6875	31.5625	N	N	N	N	1	1		0
501	0	0	0	0	0	0.42857143	-1	0	0	1.09375	7.8645833	N	N	N	N		1		0
284	0	0	0	0	0	0.32	-1	0	0	4.6875	25.5625	N	N	N	N	1	1		0
67	0	0	0	0	0	0.7	-1	0	0	2.5	28.833333	N	N	N	N	1	1	-0	0
1011		0		0.2		0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0	0
1012		0		0.2		0.36923077	-1	0	0	0	0	N	N	N	N	1	1	0	0
102		0		0.2		0.37583893	-1	0	0	0	0	N	N	N	N	1	1	0	0
129		0		0.2		0.33333333	-1	0	0	0	0	N	N	N	N	1	1	0	0
153	0	0	0	0	0	0.32	-1	0	0	4.6875	25.5625	N	N	N	N	1	1	-0	0
173		0		0.2		0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0	0
106		0		0.2		0.43636364	-1	0	0	0	0	N	N	N	N	1	1	0	0
224	0	0	0	0	0	0.46666667	-1	0	0	3.75	29.25	N	N	N	N	1	1		0
528	0	0	0	0	0	0.44444444	-1	0	0	2.8125	20.9375	N	N	N	N	1	1	-0	0
529	0	0	0	0	0	0.44444444	-1	0	0	2.8125	20.9375	N	N	N	N	1	1	-0	0

Appendix C, Table C-9: TankESP Output Report for Tables C-7 and C-8
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	Kf per unslotted pole	Kn	Kp	Ks	Loss from incoming vapors (lbs)	Loss from resident vapors (lbs)	Low-volume liquid temperature (degF)	Max. Ambient Temp. (degF)	Max. Liquid Surface Temp. (degF)	Max. TVP (psia)	Met. Data City	Met. Data State	Min. Ambient Temp. (degF)	Min. Liquid Surface Temp. (degF)	Min. TVP (psia)	Net working height (ft)	Nominal operating pressure (psia)	Non Routine Emissions (lbs)
107		0	1	1	0	0	59.98184932	68.47643836	65.00694739	0.000100034	Rodeo	CA	51.48726027	65.00694739	0.000100034	54	0	0
108		0	1	1	0	0	59.98184932	68.47643836	65.00694739	0.000100034	Rodeo	CA	51.48726027	65.00694739	0.000100034	54	0	0
110		1	1	1	0	0	59.98184932	68.47643836	65.03142584	10.869927	Rodeo	CA	51.48726027	65.03142584	10.869927	49	0	0
170		1	1	1	0	0	59.98184932	68.47643836	64.91945056	5.6973434	Rodeo	CA	51.48726027	64.91945056	5.6973434	46	0	0
172	14	1	1	1	0	0	59.98184932	68.47643836	62.46229314	5.575611867	Rodeo	CA	51.48726027	62.46229314	5.575611867	46	0	0
200	0	0	1	1	0	0	59.98184932	68.47643836	67.46622575	0.000100034	Rodeo	CA	51.48726027	57.65753224	0.000100034	46	0	0
1001			1	1	0	0	59.98184932	68.47643836	64.98355414	0.006817678	Rodeo	CA	51.48726027	64.98355414	0.006817678	46	0	0
1003			1	1	0	0	59.98184932	68.47643836	64.98355414	0.009539447	Rodeo	CA	51.48726027	64.98355414	0.009539447	46	0	0
1004	14		1	1	0	0	59.98184932	68.47643836	62.50631783	0.00618052	Rodeo	CA	51.48726027	62.50631783	0.00618052	46	0	0
1007	14	0	1	1	0	0	59.98184932	68.47643836	62.52500627	0.006185091	Rodeo	CA	51.48726027	62.52500627	0.006185091	58	0	0
1010		0	1	1	0	0	59.98184932	68.47643836	64.98355414	0.006817678	Rodeo	CA	51.48726027	64.98355414	0.006817678	46	0	0
155		1	1	1	0	0	59.98184932	68.47643836	64.98355414	0.000100034	Rodeo	CA	51.48726027	64.98355414	0.000100034	46	0	0
156		0	1	1	0	0	59.98184932	68.47643836	64.98355414	0.000100034	Rodeo	CA	51.48726027	64.98355414	0.000100034	46	0	0
157		0	1	1	0	0	59.98184932	68.47643836	64.98355414	0.000100034	Rodeo	CA	51.48726027	64.98355414	0.000100034	46	0	0
159		0	1	1	0	0	59.98184932	68.47643836	65.03991888	0.000100034	Rodeo	CA	51.48726027	65.03991888	0.000100034	46	0	0
167		1	1	1	0	0	59.98184932	68.47643836	64.91945056	5.8804971	Rodeo	CA	51.48726027	64.91945056	5.8804971	46	0	0
202	0	0	1	1	0	0	59.98184932	68.47643836	67.48061887	0.000100034	Rodeo	CA	51.48726027	57.71776927	0.000100034	46	0	0
158		0	1	1	0	0	59.98184932	68.47643836	64.98355414	0.000100034	Rodeo	CA	51.48726027	64.98355414	0.000100034	46	0	0
204	0	1	1		0	0	59.98184932	68.47643836	67.44886665	2.552989454	Rodeo	CA	51.48726027	57.58488226	2.552989454	54	0	0
205	0	1	1		0	0	59.98184932	68.47643836	67.48061887	6.020771724	Rodeo	CA	51.48726027	57.71776927	6.020771724	38	0	0
208		1	1	1	0	0	59.98184932	68.47643836	64.89436958	0.009506546	Rodeo	CA	51.48726027	64.89436958	0.009506546	54	0	0
223	0	1	1	1	0	0	59.98184932	68.47643836	67.46394702	0.000100034	Rodeo	CA	51.48726027	57.64799604	0.000100034	54	0	0
241		1	1	1	0	0	59.98184932	68.47643836	65.00449708	5.6013072	Rodeo	CA	51.48726027	65.00449708	5.6013072	40	0	0
257	0	1	1	1	0	0	59.98184932	68.47643836	67.47131332	0.000100034	Rodeo	CA	51.48726027	57.67882396	0.000100034	46	0	0
209		1	1	1	0	0	59.98184932	68.47643836	64.89436958	0.009506546	Rodeo	CA	51.48726027	64.89436958	0.009506546	54	0	0
271	0	0	1	1	0	0	59.98184932	68.47643836	67.48061887	0.000100034	Rodeo	CA	51.48726027	57.71776927	0.000100034	58	0	0
280	0	0	1	1	0	0	59.98184932	68.47643836	67.50310405	0.000100034	Rodeo	CA	51.48726027	57.81187185	0.000100034	46	0	0
281	0	0	1	1	0	0	59.98184932	68.47643836	67.50310405	0.000100034	Rodeo	CA	51.48726027	57.81187185	0.000100034	46	0	0
285	0	0	1	1	0	0	59.98184932	68.47643836	67.48061887	0.000100034	Rodeo	CA	51.48726027	57.71776927	0.000100034	58	0	0
501	0		1		0	0	59.98184932	68.47643836	67.47326318	0.225840499	Rodeo	CA	51.48726027	57.6869849	0.169974749	13	0	0
284	0	0	1	1	0	0	59.98184932	68.47643836	67.50310405	0.000100034	Rodeo	CA	51.48726027	57.81187185	0.000100034	46	0	0
67	0	1	1	1	0	0	59.98184932	68.47643836	158	0.000100034	Rodeo	CA	51.48726027	158	0.000100034	54	0	0
1011		1	1	1	0	0	59.98184932	68.47643836	64.01074509	6.56E-03	Rodeo	CA	51.48726027	64.01074509	6.56E-03	46	0	0
1012		1	1	1	0	0	59.98184932	68.47643836	64.01074509	6.56E-03	Rodeo	CA	51.48726027	64.01074509	6.56E-03	46	0	0
102		1	1	1	0	0	59.98184932	68.47643836	64.00572585	6.56E-03	Rodeo	CA	51.48726027	64.00572585	6.56E-03	54	0	0
129		0	1	1	0	0	59.98184932	68.47643836	64.03974415	6.57E-03	Rodeo	CA	51.48726027	64.03974415	6.57E-03	38	0	0
153	0	1	1	1	0	0	59.98184932	68.47643836	130	0.000100034	Rodeo	CA	51.48726027	130	0.000100034	46	0	0
173		0	1	1	0	0	59.98184932	68.47643836	63.96375392	6.55E-03	Rodeo	CA	51.48726027	63.96375392	6.55E-03	46	0	0
106		1	1	1	0	0	59.98184932	68.47643836	63.96375392	6.55E-03	Rodeo	CA	51.48726027	63.96375392	6.55E-03	46	0	0
224	0	1	1	1	0	0	59.98184932	68.47643836	67.46394702	0.000100034	Rodeo	CA	51.48726027	57.64799604	0.000100034	54	0	0
528	0	1	1	1	0	0	59.98184932	68.47643836	59.981849	0.000100034	Rodeo	CA	51.48726027	59.981849	0.000100034	38	0	0
529	0	1	1	1	0	0	59.98184932	68.47643836	59.981849	0.000100034	Rodeo	CA	51.48726027	59.981849	0.000100034	38	0	0

Appendix C, Table C-9: TankESP Output Report for Tables C-7 and C-8
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

					Stock														
Tank ID	Number of Columns	Number of Days	Number of Days Cleaning	Number of turnovers	Product	Report End Date	Report Start Date	Resident loss limit (lbs)	Rim seal Emission Factor	Rim Seal Loss (lbs)	Rim Seal Loss Factor Exponent	Rim Seal Loss Factor Kra	Rim Seal Loss Factor Krb	Roof landing loss (lbs)	Roof landing loss limit (lbs)	Roof Reflectivity (alpha)	Roof Type	Routine Emissions (lbs)	RVP
107	0	365	0	93.271118	Renewable Feedstocks			-1		0.194776273	1	0.4	0.4	0	0	0.25	EFRT	1198.809068	0
108	0	365	0	93.271118	Renewable Feedstocks			-1		0.194776273	1	0.4	0.4	0	0	0.25	EFRT	1198.810211	0
110	0	365	0	21.579419	Gasoline TVP 10.87			-1		8343.95382	1	0.4	0.4	0	0	0.25	EFRT	10476.48487	0
170	0	365	0	38.526591	Renewable Naphtha-TK170			-1		2487.7897	1	0.4	0.4	0	0	0.25	EFRT	3563.2179	0
172	0	365	0	7.6391166	Renewable Naphtha			-1	44	387.646006	1	0.4	0.4	0	0	0.25	IFRT	788.054723	0
200	0	365	0	140.94384	Renewable Feedstocks			-1	0	0	0	0	0	0	0	0.25	FixedRoof	2.41758689	0
1001	0	365	0	66.72814219	Renewable Diesel			-1		5.09193311	1	0.4	0.4	0	0	0.25	EFRT	518.77516	0.02
1003	0	365	0	37.0059428	Renewable Jet Fuel			-1		7.12036341	1	0.4	0.4	0	0	0.25	EFRT	316.11029	0
1004	0	365	0	32.81566911	Renewable Diesel			-1	52	0.708466521	1	0.4	0.4	0	0	0.25	IFRT	253.6767913	0.02
1007	19	365	0	134.30974	Renewable Diesel			-1	70	0.954410439	1	0.4	0.4	0	0	0.25	IFRT	1970.35371	0.02
1010	0	365	0	306.87893	Renewable Diesel			-1		5.09193311	1	0.4	0.4	0	0	0.25	EFRT	2363.60392	0.02
155	0	365	0	84.009114	Renewable Feedstocks			-1		0.157272768	1	0.4	0.4	0	0	0.25	EFRT	742.733054	0
156	0	365	0	120.81848	Renewable Feedstocks			-1		0.157272768	1	0.4	0.4	0	0	0.25	EFRT	1068.095926	0
157	0	365	0	120.81848	Renewable Feedstocks			-1		0.157272768	1	0.4	0.4	0	0	0.25	EFRT	1068.095544	0
159	0	365	0	90.7481	Renewable Feedstocks			-1		0.181468578	1	0.4	0.4	0	0	0.25	EFRT	925.739747	0
167	0	365	0	25.684394	Renewable Naphtha			-1		2686.75827	1	0.4	0.4	0	0	0.25	EFRT	3715.38645	0
202	0	365	0	107.91013	Renewable Feedstocks			-1	0	0	0	0	0	0	0	0.25	FixedRoof	2.86830528	0
158	0	365	0	120.81848	Renewable Feedstocks			-1		0.157272768	1	0.4	0.4	0	0	0.25	EFRT	1068.094772	0
204	0	365	0	11.56175194	Multiple			-1	0	0	0	0	0	0	0	0.25	FixedRoof	3255.40234	0
205	0	365	0	11.86138456	Multiple			-1	0	0	0	0	0	0	0	0.25	FixedRoof	5245.86715	0
208	0	365	0	16.726233	Renewable Jet Fuel			-1		6.54857619	1	0.4	0.4	0	0	0.25	EFRT	158.960251	0
223	0	365	0	25.554717	Renewable Feedstocks			-1	0	0	0	0	0	0	0	0.25	FixedRoof	1.97831339	0
241	0	365	0	6.446456111	Renewable Naphtha-TK241			-1		2655.84263	1	0.4	0.4	0	0	0.25	EFRT	3549.02549	0
257	0	365	0	70.311028	Renewable Feedstocks			-1	0	0	0	0	0	0	0	0.25	FixedRoof	2.1335993	0
209	0	365	0	22.132407	Renewable Jet Fuel			-1		6.54857619	1	0.4	0.4	0	0	0.25	EFRT	207.487255	0
271	0	365	0	157.74823	Renewable Feedstocks			-1	0	0	0	0	0	0	0	0.25	FixedRoof	6.50450723	0
280	0	365	0	198.89995	Renewable Feedstocks			-1	0	0	0	0	0	0	0	0.25	FixedRoof	5.72715504	0
281	0	365	0	198.89995	Renewable Feedstocks			-1	0	0	0	0	0	0	0	0.25	FixedRoof	5.72715504	0
285	0	365	0	157.74823	Renewable Feedstocks			-1	0	0	0	0	0	0	0	0.25	FixedRoof	6.50450723	0
501	0	365	0	43.955113	Water Treatment Sludge			-1	0	0	0	0	0	0	0	0.25	FixedRoof	1912.23651	0.5
284	0	365	0	198.89995	Renewable Feedstocks			-1	0	0	0	0	0	0	0	0.25	FixedRoof	5.72715504	0
67	0	365	0	5.0328084	Renewable Feedstock			-1	0	0	0	0	0	0	0	0.25	FixedRoof	5.83404824	0
1011	0	365	0	4.5973545	Renewable Diesel			-1		4.88797773	1	0.4	0.4	0	0	0.25	EFRT	41.6802843	0.02
1012	0	365	0	4.5973545	Renewable Diesel			-1		4.88797773	1	0.4	0.4	0	0	0.25	EFRT	41.6802843	0.02
102	0	365	0	2.9811665	Renewable Diesel			-1		5.60119127	1	0.4	0.4	0	0	0.25	EFRT	38.0560999	0.02
129	0	365	0	95.358475	Renewable Diesel			-1		4.51748907	1	0.4	0.4	0	0	0.25	EFRT	564.246679	0.02
153	0	365	0	50.415611	Renewable Feedstock			-1	0	0	0	0	0	0	0	0.25	FixedRoof	139.932002	0
173	0	365	0	93.748037	Renewable Diesel			-1		4.12781033	1	0.4	0.4	0	0	0.25	EFRT	614.560307	0.02
106	0	365	0	40.183234	Renewable Diesel			-1		4.12781033	1	0.4	0.4	0	0	0.25	EFRT	266.467417	0.02
224	0	365	0	32.17320459	Renewable Feedstock			-1	0	0	0	0	0	0	0	0.25	FixedRoof	119.2826808	0
528	0	365	0	16.062865	Renewable Feedstock			-1	0	0	0	0	0	0	0	0.25	FixedRoof	19.711585	0
529	0	365	0	16.062865	Renewable Feedstock			-1	0	0	0	0	0	0	0	0.25	FixedRoof	19.711585	0

Appendix C, Table C-9: TankESP Output Report for Tables C-7 and C-8
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

												Throughput (bbl/yr)				
Tank ID	Saturation Factor (Sa)	Seam Emission Factor	Shell Reflectivity (alpha)	Slotted pole Emission Factor	Slotted Pole Loss (lbs)	Solar insolation	Standing loss (w/out control) (lbs)	Tank base area (ft2)	Tank Diameter (ft)	Tank Height (ft)	Tank Type	Throughput (bbl)	Total estimated emissions (lbs)	Unslotted pole Emission Factor	Unslotted Pole Loss (lbs)	Vapor control efficiency for Refill/Initial purge
107	0	0	0.25	0	0		0.254891264	20358.306	161	56	EFRT	18264600	1198.809068		0.011652991	0
108	0	0	0.25	0	0		0.256041653	20358.306	161	56	EFRT	18264600	1198.810211		0.011652991	0
110	0	0	0.25	0	0		10293.68778	19113.45	156	51	EFRT	3599999.96	10476.48487		515.198437	0
170	0	0	0.25	0	0		3349.11404	9503.3178	110	48	EFRT	2999999.99	3563.2179		217.845311	0
172	0	0	0.25	0	0		745.601854	9503.3178	110	48	domed EFRT	594844.999	788.054723	14	123.3419104	0
200	0	0	0.25	0	0		13.30642701	8659.0148	105	48	FRT (no floating r	10000000.02	2.41758689	0	0	0
1001	0	0	0.25	0	0		6.29702919	13273.229	130	48	EFRT	7257232.57	518.77516		0.369312958	0
1003	0	0	0.25	0	0		9.56748773	13273.229	130	48	EFRT	4024699.72	316.11029		0.51665464	0
1004	0	0	0.25	0	0		1.649500801	13273.229	130	48	domed EFRT	3568973.09	253.6767913	14	0.190740987	0
1007	0	0	0.25	0	0		10.44847634	24052.819	175	60	cone-roof tank w	33375600	1970.35371	14	0.190882087	0
1010	0	0	0.25	0	0		6.74611462	13273.229	130	48	EFRT	33375600	2363.60392		0.369312958	0
155	0	0	0.25	0	0		0.195472405	13273.229	130	48	EFRT	9136680	742.733054		0.011652991	0
156	0	0	0.25	0	0		0.208704267	13273.229	130	48	EFRT	13140000	1068.095926		0.011652991	0
157	0	0	0.25	0	0		0.20832327	13273.229	130	48	EFRT	13140000	1068.095544		0.011652991	0
159	0	0	0.25	0	0		0.237489222	17671.459	150	48	EFRT	13140000	925.739747		0.011652991	0
167	0	0	0.25	0	0		3572.65053	9503.3178	110	48	EFRT	1999999.97	3715.38645		231.574432	0
202	0	0	0.25	0	0		17.39119273	11309.734	120	48	FRT (no floating r	10000000.02	2.86830528	0	0	0
158	0	0	0.25	0	0		0.207553879	13273.229	130	48	EFRT	13140000	1068.094772		0.011652991	0
204	0	0	0.25	0	0		17852.67803	8659.0148	105	56	FRT (no floating r	962971.598	3255.40234	0	0	0
205	0	0	0.25	0	0		16678.444	7853.9816	100	40	FRT (no floating r	630574.576	5245.86715	0	0	0
208	0	0	0.25	0	0		8.82190878	11309.734	120	56	EFRT	1819583.04	158.960251		0.514828354	0
223	0	0	0.25	0	0		20.27573996	11309.734	120	56	FRT (no floating r	2780000	1.97831339	0	0	0
241	0	0	0.25	0	0		3515.04138	11309.734	120	42	EFRT	519470.6144	3549.02549		213.18092	0
257	0	0	0.25	0	0		14.60554076	9503.3178	110	48	FRT (no floating r	5475000	2.1335993	0	0	0
209	0	0	0.25	0	0		8.82190878	11309.734	120	56	EFRT	2407700	207.487255		0.514828354	0
271	0	0	0.25	0	0		33.9660365	17671.459	150	60	FRT (no floating r	28800000.1	6.50450723	0	0	0
280	0	0	0.25	0	0		27.2708253	17671.459	150	48	FRT (no floating r	28800000.1	5.72715504	0	0	0
281	0	0	0.25	0	0		27.2708253	17671.459	150	48	FRT (no floating r	28800000.1	5.72715504	0	0	0
285	0	0	0.25	0	0		33.9660365	17671.459	150	60	FRT (no floating r	28800000.1	6.50450723	0	0	0
501	0	0	0.25	0	0		344.525283	962.11275	35	15	FRT (no floating r	97927.8723	1912.23651	0	0	0
284	0	0	0.25	0	0		27.2708253	17671.459	150	48	FRT (no floating r	28800000.1	5.72715504	0	0	0
67	0	0	0.25	0	0		0	5026.5482	80	56	FRT (no floating r	243333.336	5.83404824	0	0	0
1011	0	0	0.25	0	0		6.37218804	13273.229	130	48	EFRT	499999.995	41.6802843		0.355025652	0
1012	0	0	0.25	0	0		6.37218804	13273.229	130	48	EFRT	499999.995	41.6802843		0.355025652	0
102	0	0	0.25	0	0		7.25037854	17436.625	149	56	EFRT	499999.995	38.0560999		0.354953298	0
129	0	0	0.25	0	0		5.79029038	11309.734	120	40	EFRT	7300000	564.246679		0.355443984	0
153	0	0	0.25	0	0		0	17671.459	150	48	FRT (no floating r	7300000	139.932002	0	0	0
173	0	0	0.25	0	0		5.33515758	9503.3178	110	48	EFRT	7300000	614.560307		0.354348833	0
106	0	0	0.25	0	0		5.33515758	9503.3178	110	48	EFRT	3128999.96	266.467417		0.354348833	0
224	0	0	0.25	0	0		20.27558863	11309.734	120	56	FRT (no floating r	3499999.96	119.2826808	0	0	0
528	0	0	0.25	0	0		0	6361.7251	90	40	FRT (no floating r	691686.188	19.711585	0	0	0
529	0	0	0.25	0	0		0	6361.7251	90	40	FRT (no floating r	691686.188	19.711585	0	0	0

Appendix C, Table C-9: TankESP Output Report for Tables C-7 and C-8
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

				Vapor Control Efficiency			
Tank ID	Vapor Density	Vapor Pressure Function (P*)	Vapor Space Temperature (degF)	VCtrl Efficiency	Vent Pressure Range (psig)	Volume of vapor space (ft3)	Working loss (w/out control) (lbs)
107		1.6959E-06	0	0	0	0	1198.554155
108		1.6959E-06	0	0	0	0	1198.554155
110		0.32212253	0	0	0	0	182.796924
170		0.12148062	0	0	0	0	214.103866
172			0	0	0	0	42.4528711
200		0	63.96006509	0.98	0.06	217287.15	107.5729177
1001			0	0	0	0	512.478134
1003			0	0	0	0	306.542802
1004			0	0	0	0	252.02729
1007			0	0	0	0	1959.90519
1010			0	0	0	0	2356.85777
155		1.6959E-06	0	0	0	0	742.537583
156		1.6959E-06	0	0	0	0	1067.887221
157		1.6959E-06	0	0	0	0	1067.887221
159		1.6959E-06	0	0	0	0	925.502256
167			0	0	0	0	142.735912
202		0	64.03469498	0.98	0.06	285570.77	126.0240721
158		1.6959E-06	0	0	0	0	1067.887221
204		0	63.87005567	0.98	0.06	251923.21	144917.4392
205		0	64.03469498	0.98	0.06	165260.86	245614.912
208			0	0	0	0	150.138346
223		0	63.94824999	0.98	0.06	330809.71	78.6399289
241		0.11887954	0	0	0	0	33.98409272
257		0	63.98644405	0.98	0.06	238968.84	92.0744247
209			0	0	0	0	198.665346
271		0	64.03469498	0.98	0.06	557755.41	291.259326
280		0	64.15128317	0.98	0.06	451726.66	259.086927
281		0	64.15128317	0.98	0.06	451726.66	259.086927
285		0	64.03469498	0.98	0.06	557755.41	291.259326
501		0	63.99655502	0	0.06	7566.6159	1567.711226
284		0	64.15128317	0.98	0.06	451726.66	259.086927
67	4.27936E-06	0	158	0	0.06	144932.14	5.83404824
1011			0	0	0	0	35.3080961
1012			0	0	0	0	35.3080961
102			0	0	0	0	30.8057211
129			0	0	0	0	558.456384
153	4.48256E-06	0	130	0	0.06	451726.66	139.932002
173			0	0	0	0	609.22515
106			0	0	0	0	261.132256
224		0	63.94824999	0	0.06	330809.71	99.0070927
528	5.08654E-06	0	59.981849	0	0.06	133198.62	19.711585
529	5.08654E-06	0	59.981849	0	0.06	133198.62	19.711585

Tank ID	Acetaldehyde	Acetic acid	Acetic anhydride(acetic acid anhydride)	Acetonitrile	Acrylamide	Acrylic acid(2-propenoic acid)	Acrylonitrile(2-propenenitrile)	Allyl alcohol	Allyl chloride(3-chloro-1-propene)
107	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data
155	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	no data	no data
284	no data	no data	no data	no data	no data	no data	no data	no data	no data
67	no data	no data	no data	no data	no data	no data	no data	no data	no data
1011	no data	no data	no data	no data	no data	no data	no data	no data	no data
1012	no data	no data	no data	no data	no data	no data	no data	no data	no data
102	no data	no data	no data	no data	no data	no data	no data	no data	no data
129	no data	no data	no data	no data	no data	no data	no data	no data	no data
153	no data	no data	no data	no data	no data	no data	no data	no data	no data
173	no data	no data	no data	no data	no data	no data	no data	no data	no data
106	no data	no data	no data	no data	no data	no data	no data	no data	no data
224	no data	no data	no data	no data	no data	no data	no data	no data	no data
528	no data	no data	no data	no data	no data	no data	no data	no data	no data
529	no data	no data	no data	no data	no data	no data	no data	no data	no data

					Benzene							
Tank ID	Ammonia	Aniline	Anthracene	Benz[a]anthracene	Benzene	Benzo(g,h,i)perylene	Benzo[a]pyrene	Biphenyl	Butadiene (1,3)	Butane	Butanol (2)	Butene (1)
107	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	0.001682009	no data	8.940692296	0.00056667	no data	0	0	0	no data	no data
170	no data	no data	no data	no data	0.012002846	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	0.002473166	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
155	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	0.011473938	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	0.027246574	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	0.015470852	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	0.010896771	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	0	no data	0.014631902	0	no data	0.007105374	0	0	no data	no data
284	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
67	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1011	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1012	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
102	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
129	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
153	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
173	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
106	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
224	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
528	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
529	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

Appendix C, Table C-9: TankESP Output Report for Tables C-7 and C-8
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

																						Cresol								
Tank ID	Butene (2-methyl-1)	Butene (2-methyl-2) {isopentene}	Butene (cis-2) {(Z)-2-butene)}	Butene (trans-2({(E)-2-butene}	Butyl acetate (n-)	Butyl alcohol (n-) {butanol (1)}	Butyl alcohol (t-)	Butyl chloride (-n){1-chloro-butane}	Butyl ether (di-tert)	Butylbenzene (n-)	Butylbenzene (sec-)	Carbon disulfide	Carbon tetrachloride	Carbonyl sulfide	Chlorobenzene	Chlorobutane (2)	Chloroform	Chloroprene{2-chioro-1.3-butadiene}	Chlorotoluene (o){1 -chloro-2methylbenzene}	Chrysene	Chrysene{benzo[a]phenanthrene}	Cresol	Cresol (m-)	Cresol (o-)	Cresol (p-)	Cumene {isopropylbenzene}	Cyclohexane	Cyclohexanol	Cyclohexanone	Cyclohexene
107	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	no data	no data	no data	0.266738217	0	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
155	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.321981769	no data	no data	no data	0.917910084	0	no data	no data	no data
284	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
67	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1011	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1012	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
102	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
129	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
153	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
173	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
106	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
224	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
528	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
529	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

Appendix C, Table C-9: TankESP Output Report for Tables C-7 and C-8
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	Cyclopentadiene	Cyclopentane	Cyclopentanone	Cyclopentene	Decane (n-)	DGM ether {diethylene glycol monomethyl ether}	Dibromoethane (1,2) {ethylene dibromide}	Dibromopropane (1,2)	Dibromopropane (1,3)	Dichioroethane (1,1)	Dichloroethane (1,2)	Dichloroethylene (1,2){1,2 dichloroethene}	Dichloroethylene (trans-1,2)
107	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
155	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
284	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
67	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1011	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1012	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
102	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
129	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
153	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
173	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
106	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
224	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
528	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
529	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

Tank ID	Dichlorotoluene (3,4)	Diethanolamine {DEA}	Diethoxyethane (1,1)	Diethoxymethane	Diethyibenzene (1,2)	Diethyibenzene (1,4)	Diethyl (n.n) aniline {N,N-diethylbenzenamine}	Diethyl ketone {3-pentanone}	Diethyl sulfide	Diethylamine	Diethylbenzene (1,3)	Di-isopropyl ether	Dimethoxyethane (1.2)
107	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
155	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
284	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
67	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1011	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1012	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
102	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
129	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
153	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
173	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
106	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
224	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
528	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
529	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

Appendix C, Table C-9: TankESP Output Report for Tables C-7 and C-8
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	Dimethyipentane (2,2)	Dimethyl butane (2,2)	Dimethyl butane (2,3)	Dimethyl cyclopentane (1,1)	Dimethyl formamide {n,n}	Dimethyl hydrazine (1,1)	Dimethyl phthalate	Dimethyl sulfide	Dimethyl-2-ethylbenzene (1,3)
107	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data
155	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	no data	no data
284	no data	no data	no data	no data	no data	no data	no data	no data	no data
67	no data	no data	no data	no data	no data	no data	no data	no data	no data
1011	no data	no data	no data	no data	no data	no data	no data	no data	no data
1012	no data	no data	no data	no data	no data	no data	no data	no data	no data
102	no data	no data	no data	no data	no data	no data	no data	no data	no data
129	no data	no data	no data	no data	no data	no data	no data	no data	no data
153	no data	no data	no data	no data	no data	no data	no data	no data	no data
173	no data	no data	no data	no data	no data	no data	no data	no data	no data
106	no data	no data	no data	no data	no data	no data	no data	no data	no data
224	no data	no data	no data	no data	no data	no data	no data	no data	no data
528	no data	no data	no data	no data	no data	no data	no data	no data	no data
529	no data	no data	no data	no data	no data	no data	no data	no data	no data

Tank ID	Dimethyl-2-ethylbenzene (1,4)	Dimethylhexane (2,4)	Dimethylpentane (2,3)	Dimethylpentane (2,4)	Dimethylpentane (3,3)	Dioxane (1,4)	Dipropyl ether {di-n-propyl ether}	DMN (2,6) {2,6-dimethyl-naphthalene}	Dodecane (n-)
107	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data
155	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	no data	no data
284	no data	no data	no data	no data	no data	no data	no data	no data	no data
67	no data	no data	no data	no data	no data	no data	no data	no data	no data
1011	no data	no data	no data	no data	no data	no data	no data	no data	no data
1012	no data	no data	no data	no data	no data	no data	no data	no data	no data
102	no data	no data	no data	no data	no data	no data	no data	no data	no data
129	no data	no data	no data	no data	no data	no data	no data	no data	no data
153	no data	no data	no data	no data	no data	no data	no data	no data	no data
173	no data	no data	no data	no data	no data	no data	no data	no data	no data
106	no data	no data	no data	no data	no data	no data	no data	no data	no data
224	no data	no data	no data	no data	no data	no data	no data	no data	no data
528	no data	no data	no data	no data	no data	no data	no data	no data	no data
529	no data	no data	no data	no data	no data	no data	no data	no data	no data

Ethylbenzen

Tank ID	Epichlorohydrin {chloromethyl oxirane}	Ethanol {ethyl alcohol}	Ethyipentane (3)	Ethyl acetate	Ethyl acrylate {ethyl ester 2-propenoic acid}	Ethyl chloride	Ethyl ether {diethyl ether}	Ethylamine	Ethylbenzene
107	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	no data	no data	no data	no data	no data	4.312077542
170	no data	no data	no data	no data	no data	no data	no data	no data	0.027548649
172	no data	no data	no data	no data	no data	no data	no data	no data	0.005501196
200	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data
155	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	0.021300269
202	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	0.022771211
205	no data	no data	no data	no data	no data	no data	no data	no data	0.012626078
208	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	0.011928131
257	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	no data	0.0005237
284	no data	no data	no data	no data	no data	no data	no data	no data	no data
67	no data	no data	no data	no data	no data	no data	no data	no data	no data
1011	no data	no data	no data	no data	no data	no data	no data	no data	no data
1012	no data	no data	no data	no data	no data	no data	no data	no data	no data
102	no data	no data	no data	no data	no data	no data	no data	no data	no data
129	no data	no data	no data	no data	no data	no data	no data	no data	no data
153	no data	no data	no data	no data	no data	no data	no data	no data	no data
173	no data	no data	no data	no data	no data	no data	no data	no data	no data
106	no data	no data	no data	no data	no data	no data	no data	no data	no data
224	no data	no data	no data	no data	no data	no data	no data	no data	no data
528	no data	no data	no data	no data	no data	no data	no data	no data	no data
529	no data	no data	no data	no data	no data	no data	no data	no data	no data

Appendix C, Table C-9: TankESP Output Report for Tables C-7 and C-8
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	Ethylcyclohexane	Ethylcyclopentane	Ethylene	Ethylene glycol	Ethyleneoxide	Fluoranthene	Fluorobenzene	Fonnic acid	Formic acid	Freon 11 {trichlorofluoromethane}	Furan	Furfural {2-furancarboxaldehyde}
107	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
155	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
284	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
67	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1011	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1012	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
102	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
129	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
153	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
173	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
106	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
224	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
528	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
529	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

					Hexane					Hydrogen Sulfide (H2S)									
Tank ID	Heneicosane (n)	Heptane (n-)	Heptene (1)	Hexadiene (1,5)	Hexane (n-)	Hexanol (1)	Hexene (1)	Hydrogen cyanide {hydrocyanic acid}	Hydrogen fluoride	Hydrogen sulfide	Indene	Iso-butane	isobutene {methylpropene (2)}	Isobutyl alcohol {2-methyl 1-propanol}	Iso-octane {2,2,4 trimethylpentane}	Isopentane {2-methylbutane}	Isoprene {2-methyl 1,3-butadiene}	Isopropyl alcohol {isopropanol}	Isopropyl benzene {cumene}
107	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	no data	39.23655575	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	84.60732213	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	17.56553342	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
155	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	82.61827485	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	206.2314832	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	117.7785147	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	81.4112641	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	349.4487664	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data
284	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
67	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1011	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1012	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
102	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
129	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
153	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
173	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
106	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
224	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
528	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
529	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

Appendix C, Table C-9: TankESP Output Report for Tables C-7 and C-8
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

					Mercury (all) pollutant																				
Tank ID	isopropylbenzene (1-methyl-2)	Isopropyltoluene (p-)	Lead	MDI {methylene diphenyl diisocyanate}	Mercury	Methacrylonitrile {2-methyl 2-propenenitrile}	Methane	Methanol {methyl alcohol}	Methyihexane (2)	Methyl acrylate {methyl ester 2-propenoic acid}	Methyl ethyl ketone {2-butanone}	Methyl isobutyl ketone {hexone}	Methyl methacrylate	Methyl propyl ether	Methyl styrene (alpha)	Methyl-2-ethylbenzene (1)	Methylcyclohexane	Methylcyclopentane	Methyldichlorosilane	Methylene chloride {dichloromethane}	Methylheptane (2)	Methylheptane (3)	Methylheptane (4)	Methylhexane (2) {isoheptane}	Methylhexane (3)
107	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
155	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	0	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
284	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
67	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1011	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1012	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
102	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
129	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
153	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
173	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
106	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
224	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
528	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
529	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

Appendix C, Table C-9: TankESP Output Report for Tables C-7 and C-8
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

								Methyl tertiary-butyl ether	Naphthalene																						Phenol					
Tank ID	Methylnaphthalene (1-)	Methylnaphthalene (2-)	Methyloctane (4)	Methylpentane (2) {isohexane}	Methylpentane (3)	Monoethanolamine {MEA}	Morpholine	MTBE {Methyl tert-butyl ether}	Naphthalene	Neopentane {dimethylpropane (2,2)}	Nickel	Nitrates {Propyl nitrate}	Nitrobenzene	Nitromethane	Nonadecane (n)	Nonane (n-)	Octadecane (n)	Octane (n-)	Octanol (1)	Octene (1)	PACs {Chrysene}	PAHs	Pentachloroethane	Pentadiene (1,2)	Pentadiene (1,4)	Pentadiene (2,3)	Pentane (n-)	Pentene (1)	Pentyne (1)	Phenanthrene	Phenol	Phosgene	Picoline (3) {3-methyl pyridine}	Propane	Propanethiol (1)	Propanethiol (2)
107	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	no data	no data	no data	no data	0	0.072970196	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.004661322	0.005447348	no data	no data	no data	no data	no data	no data	no data	0.003436718	0	no data	no data	no data	no data	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	0.004327876	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	no data	no data	no data	no data	0.000858034	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
155	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	0.002901636	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	0.000124887	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	6.69871E-05	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	0.000728801	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	no data	no data	no data	0	0.052241457	no data	0	no data	no data	no data	no data	no data	no data	no data	no data	no data	0	0	no data	no data	no data	no data	no data	no data	no data	0	0.042389563	no data	no data	no data	no data	no data
284	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
67	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1011	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1012	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
102	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
129	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
153	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
173	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
106	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
224	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
528	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
529	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

Appendix C, Table C-9: TankESP Output Report for Tables C-7 and C-8
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

					Propylene					Styrene								Toluene											
Tank ID	Propyl alcohol (n) {propanol (1)}	Propylamine (n) {1-propanamine}	Propylbenzene (n-)	Propylcyclohexane	Propylene	Propylene glycol (1,2) {1,2 propanediol}	Propylene oxide	Pyridine	Resorcinol	Styrene	Tetra ethyl lead	Tetrachloroethane (1,1,1,2)	Tetrachloroethane (1,1,2,2)	Tetrachloroethylene	Tetradecane (n-)	Tetrahydrofuran	Tetramethylbenzene (1,2,4,5)	Toluene	Toluene diisocyanate	Trichloroethane (1,1,1)	Trichloroethane (1,1,2)	Trichloroethylene	Trichloropropane (1,2,3)	Tridecane (n-)	Triethanolamine {TEA}	Trifluoroethane (1.1.2-trichloro-1,2,2)	Trimethylbenzene (1,2,3)	Trimethylbenzene (1,2,4)	Trimethylbenzene (1,3,5)
107	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
108	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
110	no data	no data	no data	no data	0	no data	no data	no data	no data	0	no data	no data	no data	no data	no data	no data	no data	42.79020549	no data	no data	no data	no data	no data	no data	no data	no data	no data	5.319844635	no data
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.109928829	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
172	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.022250031	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
200	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
155	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
156	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
157	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
159	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.095475296	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
202	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
158	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.173225542	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
205	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.097262738	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
208	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
223	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
241	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.074754574	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
257	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
209	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
271	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
280	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
281	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
285	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
501	no data	no data	no data	no data	2435.843207	no data	no data	no data	no data	5.95291147	no data	no data	no data	no data	no data	no data	no data	0.007483129	no data	no data	no data	no data	no data	no data	no data	no data	no data	1.354708432	no data
284	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
67	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1011	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1012	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
102	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
129	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
153	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
173	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
106	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
224	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
528	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
529	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

Appendix C, Table C-9: TankESP Output Report for Tables C-7 and C-8
Site: Rodeo Renewed, Phillips 66 San Francisco Refinery - Rodeo Renewed, Rodeo, CA
Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

										Xylene							
Tank ID	Trimethylchlorosilane {chlorotrimethylsilane}	Trimethylcyclohexane (1,1,3)	Trimethylcyclopentane (1,1,3)	Trimethylpentane (2,2,3)	Trimethylpentane (2,3,4)	Trimethylpentane (2.3,3)	Undecane (n-)	Vinyl acetate {acetic acid ethenyl ester}	Vinylidene chloride {1,1-dichloro ethene}	Xylene	Xylene (m-)	Xylene (o-)	Xylene (p-)	Zinc compounds			
107	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
108	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
110	no data	no data	no data	no data	no data	no data	no data	no data	no data	23.48821917	no data	no data	no data	0			
170	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.020608192	no data	no data	no data	no data			
172	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.00411146	no data	no data	no data	no data			
200	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
1001	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
1003	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
1004	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
1007	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
1010	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
155	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
156	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
157	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
159	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
167	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.015731603	no data	no data	no data	no data			
202	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
158	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
204	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.015456085	no data	no data	no data	no data			
205	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.008562001	no data	no data	no data	no data			
208	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
223	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
241	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.008400737	no data	no data	no data	no data			
257	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
209	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
271	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
280	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
281	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
285	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
501	no data	no data	no data	no data	no data	no data	no data	no data	no data	0.003044538	no data	no data	no data	0			
284	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data			
67	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1011	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
1012	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
102	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
129	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
153	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
173	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
106	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
224	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
528	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
529	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

Appendix C, Table C-10
Potential to Emit (PTE) POC Emissions for S-97 Tank 100
Phillips 66 Company - San Francisco Refinery
Rodeo, CA

Source Number	Vapor Flow Rate[1]	VOC Concentration[1]	VOC Flow Rate	POC Emission Rate	
	scfm	ppmv	scfm	lb/day	ton/yr
S-97 [exempt per 123.3.2 and 2 1-123.3.6]	2,911	10	0.029	1.7	0.316

Notes:
1. All parameters are based on engineering design. VOC concentration is 10 ppmv at outlet of carbon canisters. POC=VOC
2. Daily and annual VOC emission rates calculated from VOC flow rate using the molar volume of an ideal gas at 70°F and 1 atm to convert from volume to moles and assuming all VOCs are methane to convert from moles to mass. Continuous facility operation is also assumed (24 hours per day, 365 days per year).This is conservative in that emissions only occur during loading.

Comparison Between Baseline Potential to Emit and Post-Project Potential to Emit

Source Number	Tank Number[1]	Baseline PTE[2]			Post-Project PTE[2]			Net Change in Emissions	
		Stock	Throughput (bbl/yr)	POC Emissions (lb/yr)	Stock	Throughput (bbl/yr)	POC Emissions (lb/yr)	lb/yr	ton/yr
S-97 [exempt per 123.3.2 and 2 1-123.3.6]	Tank 100	Crude-Blended	15,571,000	4,782	Renewable Feedstock	15,571,000	633	-4,149	-2.1

Notes:
1. See TankESP output report for descriptions of tank type and parameters.
2. Stocks and throughput for each scenario based on engineering design as shown in TankESP output report. Emissions were calculated using AP-42 Chapter 7 methodology. Detailed summaries of the tank parameters, stock parameters, and meteorological data used in these calculations are presented in TankESP output report.

Abbreviations:
lb - pound
ppmv - parts per million by volume
scfm - standard cubic feet per minute
VOC - volatile organic compound
yr - year
bbl - barrel(s)
POC - precursor organic compound(s)

Conversions

386.9	ft3/lbmol at 70F and 1 atm
16	lb/lbmol Methane
2000	lb/ton
60	min/hr
24	hr/day
365	day/yr

References:
US EPA. June 2020. AP-42, Fifth Edition, Volume I. Chapter 7: Liquid Storage Tanks. Available at: https://www3.epa.gov/ttnchie1/ap42/ch07/. Accessed March 2021.

Conversions

386.9	ft3/lbmol at 70F and 1 atm
16	lb/lbmol Methane
2000	lb/ton
60	min/hr
24	hr/day
365	day/yr

Input Form for Storage Tank Properties

Return to Input_Service
Go to Input_FloatingRoof

Once tank data have been entered, subsequent entries are required only in the event of a change to a tank configuration.

Tank Shell Finish	Tank Roof Finish	Code	Finish	Good	Poor
A	A	A	aluminum-colored paint (specular)	0.39	0.49
B	B	B	aluminum-colored paint (diffuse)	0.60	0.68
C	C	C	beige/cream-colored paint	0.35	0.49
D	D	D	brown paint	0.58	0.67
E	E	E	light gray paint	0.54	0.63
F	F	F	medium gray paint	0.68	0.74
G	G	G	black paint	0.97	0.97
H	H	H	red primer or dark green paint	0.89	0.91
I	I	I	rust (unpainted iron oxide)	0.38	0.50
J	J	J	tan paint	0.43	0.55
K	K	K	white paint	0.17	0.34
	L	L	mill finish aluminum (unpainted)	0.10	0.15

Solar Absorptance values
Guide to finishes:
left column is for Good condition
right column is for Poor condition

Columns below are required ONLY if the tank has NO floating roof. {scroll to the right for TX add'l input}

list each Tank only once **Tank ID No.**	for horizontal tanks, enter the overall length in the 'Tank Height' field **Tank Diameter** (feet)	**Tank Height** (feet)	**Fixed Roof Type** A column-supported(cone) B self-supporting (dome) C no fixed roof (open top) OR D horizontal tank; enter the code letter	Tank Shell Finish: enter the code letter	condition of the tank shell finish, enter: G for good, or P for poor	Tank Roof Finish: enter the code letter	condition of the tank roof finish, enter: G for good, or P for poor	*If blank, vent settings default to typical values shown* **Nominal Operating Pressure** if equipped with typical breather (conservation) vents: enter (0) (psig)	**Vent Relieving Pressures** **Minimum (neg. if vacuum)** enter (-0.03) (psig)	**Maximum Pressure** enter (0.03) (psig)	*If blank, Max. defaults to [(tank height) - 1ft]; Min. defaults to 1 foot.* **Liquid Levels** **Max. (Fill Ht.)** (feet)	**Min. (depth of heel)** (feet)	**Roof Slope** *If blank, defaults to 0.75 (3/4 on 12)* in. per ft.	**Vapor Recovery?** If routed to vapor recovery, enter the VRU efficiency (blank, if no vapor recovery; [redacted] (%)	These only differ from the given values for the case of horizontal tanks Effective Tank Diameter (feet)	Effective Tank Height (feet)	Add'l info for hourly emission rates **Maximum Pump Rate** max fill or discharge rate whichever is greater (gal/hr)	Add'l FRT vent info for TX NSR permit applications {Table 7(a)} Enter the quantity of vents (do not include emergency vents) Enter either Combination P/V vents, Separate P & V vents, or Open vents. **Comb P/V vents** (qty)	**Separate P-vent** (qty)	**V-vent** (qty)	**Open vents** (qty)	Add'l info for TX NSR permit appl's {Tables 7(c) & (d)} **Condition of Inside of Shell** L Light rust D Dense rust G Gunite lined *defaults to* L enter code letter	Add'l info for TX NSR permit appl's {Table 7(c)} **Construction of Tank Shell** W Welded R Riveted *defaults to* W enter code letter	Add'l info for determining NSPS applicability **Date Tank was Built or last reconstr'd or modif'd** enter date (mm/dd/yy)	Add'l info for determining MACT applicability **Associated Source Categ.** R Petroleum Refining H Organic Chem Mfr O OLD G Gas.Distrib. enter code letter
21	3.6	7.3	A	K	G	K	G								3.6	7.3									
67	80	56	A	K	G	K	G								80	56									
100	225	48	C	K	G	K	G								225	48									
101	149	56	C	K	G	K	G								149	56									
102	149	56	C	K	G	K	G								149	56									
104	140	48	C	K	G	K	G								140	48									
105	140	48	C	K	G	K	G								140	48									
106	110	48	C	K	G	K	G								110	48									
107	161	56	C	K	G	K	G								161	56									
108	161	56	C	K	G	K	G								161	56									
109	156	51	C	K	G	K	G								156	51									
110	156	51	C	K	G	K	G								156	51									
112	156	51	C	K	G	K	G								156	51									
129	120	40	C	K	G	K	G								120	40									
130	180	57	C	K	G	K	G								180	57									
150	120	40	C	K	G	K	G								120	40									
153	150	48	C	K	G	K	G								150	48									
154	150	48	C	K	G	K	G								150	48									
155	130	48	C	K	G	K	G								130	48									
156	130	48	C	K	G	K	G								130	48									
157	130	48	C	K	G	K	G								130	48									
158	130	48	C	K	G	K	G								130	48									
159	150	48	C	K	G	K	G								150	48									
160	110	48	C	K	G	K	G								110	48									
167	110	48	C	K	G	K	G								110	48									
168	110	48	C	K	G	K	G								110	48									
169	110	48	C	K	G	K	G								110	48									
170	110	48	C	K	G	K	G								110	48									
172	110	48	B	K	G	K	G								110	48									
173	110	48	C	K	G	K	G								110	48									
174	110	48	C	K	G	K	G								110	48									
180	110	48	C	K	G	K	G								110	48									
194	60	48	C	K	G	K	G								60	48									
200	105	48	A	K	G	K	G							98.00%	105	48									
201	120	48	A	K	G	K	G								120	48									
202	120	48	A	K	G	K	G							98.00%	120	48									
203	120	40	C	K	G	K	G								120	40									
204	105	56	A	K	G	K	G							98.00%	105	56									
205	100	40	A	K	G	K	G							98.00%	100	40									
206	50	36	C	K	G	K	G								50	36									
208	120	56	C	K	G	K	G								120	56									
209	120	56	C	K	G	K	G								120	56									
210	120	56	C	K	G	K	G								120	56									
223	120	56	A	K	G	K	G							98.00%	120	56									
224	120	56	A	K	G	K	G								120	56									
235	40	48	A	K	G	K	G							98.00%	40	48									
236	40	48	A	K	G	K	G							98.00%	40	48									
241	120	42	C	K	G	K	G								120	42									
242	120	42	C	K	G	K	G								120	42									
243	120	56	C	K	G	K	G								120	56									
257	110	48	A	K	G	K	G							98.00%	110	48									
269	77	48	A	K	G	K	G							98.00%	77	48									
270	77	48	A	K	G	K	G								77	48									
271	150	60	A	K	G	K	G							98.00%	150	60									
280	150	48	A	K	G	K	G							98.00%	150	48									
281	150	48	A	K	G	K	G							98.00%	150	48									
284	150	48	A	K	G	K	G							98.00%	150	48									
285	150	60	A	K	G	K	G							98.00%	150	60									
287	130	48	C	K	G	K	G								130	48									
288	130	48	C	K	G	K	G								130	48									

Input Form for Storage Tank Properties

Input Form 2 of 3

Return to Input_Service
Go to Input_FloatingRoof

Once tank data have been entered, subsequent entries are required only in the event of a change to a tank configuration.

Tank Shell Finish / **Tank Roof Finish** codes; **Solar Absorptance values**

Code	Finish	Good	Poor
A	aluminum-colored paint (specular)	0.39	0.49
B	aluminum-colored paint (diffuse)	0.60	0.68
C	beige/cream-colored paint	0.35	0.49
D	brown paint	0.58	0.67
E	light gray paint	0.54	0.63
F	medium gray paint	0.68	0.74
G	black paint	0.97	0.97
H	red primer or dark green paint	0.89	0.91
I	rust (unpainted iron oxide)	0.38	0.50
J	tan paint	0.43	0.55
K	white paint	0.17	0.34
L	mill finish aluminum (unpainted)	0.10	0.15

Guide to finishes:
left column is for Good condition
right column is for Poor condition

Columns below are required ONLY if the tank has NO floating roof. {scroll to the right for TX add'l input}

Fixed Roof Type: A column-supported(cone); B self-supporting (dome); C no fixed roof (open top); OR D horizontal tank

Condition of Inside of Shell: L Light rust; D Dense rust; G Gunite lined — *defaults to* L

Construction of Tank Shell: W Welded; R Riveted — *defaults to* W

Associated Source Categ.: R Petroleum Refining; H Organic Chem Mfr; O OLD; G Gas.Distrib.

list each Tank only once Tank ID No.	for horizontal tanks, enter the overall length in the 'Tank Height' field Tank Diameter (feet)	Tank Height (feet)	Fixed Roof Type enter the code letter	Tank Shell Finish enter the code letter	condition of the tank shell finish, enter: G for good, or P for poor	Tank Roof Finish enter the code letter	condition of the tank roof finish, enter: G for good, or P for poor	*If blank,* vent settings default to typical values shown — Nominal Operating Pressure; if equipped with typical breather (conservation) vents: enter (0) (psig)	Vent Relieving Pressures Minimum (neg. if vacuum) enter (-0.03) (psig)	Vent Relieving Pressures Maximum Pressure enter (0.03) (psig)	*If blank,* Max. defaults to [(tank height) - 1ft]; Min. defaults to 1 foot. Liquid Levels Max. (Fill Ht.) (feet)	Liquid Levels Min. (depth of heel) (feet)	Roof Slope *If blank, defaults to 0.75 (3/4 on 12)* in. per ft.	Vapor Recovery? If routed to vapor recovery, enter the VRU efficiency (blank, if no vapor recovery; [redacted] (%)	These only differ from the given values for the case of horizontal tanks Effective Tank Diameter (feet)	Effective Tank Height (feet)	Add'l info for hourly emission rates Maximum Pump Rate max fill or discharge rate whichever is greater (gal/hr)	Add'l FRT vent info for TX NSR permit applications {Table 7(a)} Enter the quantity of vents (do not include emergency vents) Enter either Combination P/V vents, Separate P & V vents, or Open vents. Comb P/V vents (qty)	Separate P-vent (qty)	Separate V-vent (qty)	Open vents (qty)	Add'l info for TX NSR permit appl's {Tables 7(c) & (d)} Condition of Inside of Shell enter code letter	Add'l info for TX NSR permit appl's {Table 7(c)} Construction of Tank Shell enter code letter	Add'l info for determining NSPS applicability Date Tank was Built or last reconstr'd or modif'd enter date (mm/dd/yy)	Add'l info for determining MACT applicability Associated Source Categ. enter code letter
291	100	40	C	K	G	K	G								100	40									
292	100	40	C	K	G	K	G								100	40									
294	82	40	A	K	G	K	G							98.00%	82	40									
295	52	40	C	K	G	K	G								52	40									
296	110	48	C	K	G	K	G								110	48									
298	90	48	C	K	G	K	G								90	48									
304	15	16	A	K	G	K	G								15	16									
501	35	15	A	K	G	K	G								35	15									
529	90	40	A	K	G	K	G								90	40									
674	114	30	A	K	G	K	G								114	30									
1001	130	48	C	K	G	K	G								130	48									
1002	130	48	C	K	G	K	G								130	48									
1003	130	48	C	K	G	K	G								130	48									
1004	130	48	B	K	G	K	G								130	48									
1005	130	48	B	K	G	K	G								130	48									
1006	130	48	C	K	G	K	G								130	48									
1007	175	60	A	K	G	K	G								175	60									
1009	130	48	C	K	G	K	G								130	48									
1010	130	48	C	K	G	K	G								130	48									
1011	130	48	C	K	G	K	G								130	48									
1012	130	48	C	K	G	K	G								130	48									
S1012	8	23	D	E	G	E	G			0.5					15.30608	6.2831853									

For Floating-Roof Tanks:
Entry is required for every field except Floating Roof Type and the Optional Data Entry fields for Deck Fittings (to the far right), all of which will default as indicated if left blank.
Return to Input_Service
Return to Input_Tank

Once floating roof data have been entered, subsequent entries are required only in the event of a change to a floating roof.

Fixed Roof Type
A column-supported(cone)
B self-supporting (dome)
C no fixed roof (open top)
OR
D horizontal tank

Floating Roof Type
A steel pontoon-type EFR (API 650 App C-type) (default for EFRTs and Domed EFRTs)
B steel double-deck EFR (API 650 App C-type)
C alum. bolted-deck IFR (API 650 App H-type) (default for IFRTs)
click here to enter bolted deck constr.
D steel welded-deck IFR (API 650 App H-type) (includes steel-pan type)
E no floating roof (Fixed-Roof Tank)
enter the code letter

Rim Seal Type
Welded Tanks, Avg-Fitting Rim Seals
Mechanical-Shoe Primary Seal
A with NO Secondary Seal
B w/ Shoe-Mtd Secondary Seal
C w/ Rim-Mtd Secondary Seal
Liquid-Mounted Primary Seal
D with NO Secondary Seal
E with a Weather Shield
F w/ Rim-Mtd Secondary Seal
Vapor-Mounted Primary Seal
G with NO Secondary Seal
H with a Weather Shield
I w/ Rim-Mtd Secondary Seal
Add'l Mech-Shoe Seals, Special Conditions
J w/ NO Secondary Seal - tight fitting
K w/ Rim-Mtd Secondary Seal - tight fitting
L w/ NO Sec.- Riveted Tank (loose fitting)
M w/Rim-Mtd Sec.-Riveted Tank(loose fitting)
enter the code letter

Guidepole / Gaugepole Type

Guidepole Code		Deck Cover Gasket	Float	Pole Wiper	Pole Sleeve
A	Unslotted	No	na	No	No
B	Unslotted	YES	na	No	No
C	Unslotted	No	na	No	YES
D	Unslotted	YES	na	No	YES
E	Unslotted	YES	na	YES	No
F	Slotted	Y or N	No	No	No
G	Slotted	Y or N	YES	No	No
H	Slotted	YES	No	YES	No
I	Slotted	YES	No	No	YES
J	Slotted	YES	YES	YES	No
K	Slotted	YES	No	YES	YES
L	Slotted	YES	YES	YES	YES

enter the code letter / If no guidepole / gaugepole, enter 0 for quantity

Any Deck Fitting:	A	B	
	no gasket or controls	gasketed	
Additional Control Options:	C	D (for IFRs)	
Access Hatch	bolted & gasketed	na	
Gauge Float	bolted & gasketed	na	
Gauge Hatch	na	slit-fabric seal	
Vacuum Breaker	na	na	
Deck Drain	90% Closed	1" diameter	
Leg,pntn area(orIFR)	with sock (no gasket)	IFR-type	Note 1
Leg,cntr area(orDblDk)	with sock (no gasket)	none	Note 2
Rim Vent	na	na	
Column, round pipe	na	flex. fabric sleeve	
Column, built-up	na	na	
Ladder (vertical)	na	slotted w/sleeve*	

*An IFR ladder having pipe legs, one of which is slotted; control measure is a ladder sleeve.

Default Control Status for:

EFR-type deck pontoon	EFR-type deck dbl deck	IFR-type deck aluminum	IFR-type deck steel pan	
C	C	C	C	
C	C	C	C	
B	B	D	D	
B	B	B	B	
C	C	D	D	default quantity for EFR pontoon & IFR steel pan is zero
A	A	D	D	
A	A	A	A	default quantity for IFR-types is zero
B	B	B	B	default quantity for IFR-types is zero
B	B	B	B	default quantity for EFR-types is zero
B	B	B	B	default quantity for EFR-types is zero
B	B	B	B	default quantity for EFR-types is zero

Bold magenta font indicates a difference from TANKS defaults.

1) Use this row for IFR deck legs (or for the pontoon-area legs of pontoon-type EFRs). IFR deck legs typically have **12-inch tall sleeves**, whereas EFR pontoon-area legs typically have **30-inch sleeves**.
2) Use this row for the deck legs of double-deck EFRs (or for the center-area legs of pontoon-type EFRs). Double-deck EFR legs and center-area legs for pontoon-type EFRs typically have **48-inch sleeves**.

TANKS Default Control Status for:

EFR-type deck pontoon	EFR-type deck dbl deck	IFR-type deck aluminum	IFR-type deck steel pan
C	C	A	A
A	A	A	A
B	B	D	D
B	B	B	B
n/a	A	D	n/a
A	A	D	D
A	A	n/a	n/a
B	B	n/a	n/a
n/a	n/a	A	A
n/a	n/a	A	A
n/a	n/a	A	A

Floating Roof Deck Construction
If Bolted (Type C), enter dimension(s):
Skin & Pontoon (i.e., noncontact) **Width** — if unknown, enter: 60 blank
Sandwich Panel (i.e., contact) **Enter Panel Width Length** — if unknown, enter: 60 120
If columns are to be added, insert them before this column.

Effective Column Diameter (if left blank, defaults to 0.7 for pipe & 1.1 for built-up) (feet)

Tank ID No.	Diameter (feet)	Fixed Roof Type	Floating Roof Type	Rim Seal Type	Guidepole code letter	Guidepole quantity	Diameter (to nearest 10 feet for estimating deck fitting quantity)
21	3.6	A	E			0	0
67	80	A	E			0	80
100	225	C	A	K	E	1	230
101	149	C	B	K	E	1	150
102	149	C	A	K	E	1	150
104	140	C	B	K	E	1	140
105	140	C	B	K	E	1	140
106	110	C	A	K	E	1	110
107	161	C	B	K	E	1	160
108	161	C	B	K	E	1	160
109	156	C	A	K	E	1	160
110	156	C	B	K	E	1	160
112	156	C	B	K	E	1	160
129	120	C	A	K	E	1	120
130	180	C	B	K	E	1	180
150	120	C	B	K	E	1	120
153	150	C	A	K	E	1	150
154	150	C	A	K	E	1	150
155	130	C	B	K	E	1	130
156	130	C	B	K	E	1	130
157	130	C	B	K	E	1	130
158	130	C	B	K	E	1	130
159	150	C	B	K	E	1	150
160	110	C	B	K	E	1	110
167	110	C	B	K	E	1	110
168	110	C	B	K	E	1	110
169	110	C	B	K	E	1	110
170	110	C	B	K	E	1	110
172	110	B	B	K	E	1	110
173	110	C	A	K	E	1	110
174	110	C	B	K	E	1	110
180	110	C	B	K	E	1	110
194	60	C	B	K	E	1	60
200	105	A	E			0	110
201	120	A	E			0	120
202	120	A	E			0	120
203	120	C	A	K	E	1	120
204	105	A	E			0	110
205	100	A	E			0	100
206	50	C	A	K	E	1	50
208	120	C	B	K	E	1	120
209	120	C	B	K	E	1	120
210	120	C	B	K	E	1	120
223	120	A	E			0	120
224	120	A	E			0	120
235	40	A	E			0	40
236	40	A	E			0	40
241	120	C	B	K	E	1	120
242	120	C	B	K	K	1	120
243	120	C	B	K	E	1	120
257	110	A	E			0	110
269	77	A	E			0	80
270	77	A	E			0	80
271	150	A	E			0	150
280	150	A	E			0	150
281	150	A	E			0	150
284	150	A	E			0	150
285	150	A	E			0	150
287	130	C	B	K	E	1	130
288	130	C	B	K	E	1	130
291	100	C	A	K	E	1	100
292	100	C	A	K	E	1	100
294	82	A	E			0	80
295	52	C	B	K	E	1	50
296	110	C	B	K	E	1	110
298	90	C	B	K	E	1	90
304	15	A	E			0	20
501	35	A	E			0	40
529	90	A	E			0	90
674	114	A	E			0	110
1001	130	C	B	K	E	1	130
1002	130	C	B	K	E	1	130
1003	130	C	B	K	E	1	130
1004	130	C	B	K	E	1	130
1005	130	B	B	K	E	1	130
1006	130	C	B	K	E	1	130
1007	175	A	B	K	E	1	180
1009	130	C	A	K	E	1	130
1010	130	C	B	K	E	1	130
1011	130	C	A	K	E	1	130
1012	130	C	A	K	E	1	130
S1012	15.30608	D					20

Make entries in these fields ONLY to override the default control status or quantity (any code or quantity left blank will revert to the default value).

Tank ID No.	Access Hatch Code	Quantity	Code	Quantity	Gauge Float Code	Quantity	Code	Quantity	Gauge Hatch Code	Quantity	Code	Quantity	Vacuum Breaker Code	Quantity	Code	Quantity	Deck Drain Code	Quantity	Code	Quantity
21																				
67																				
100	C	2	C	2	B	1	B	1	B	1	B	1	B	2	B	2	C	0	C	0
101			C	1			C	1			B	1			B	2	C	1	C	1
102			C	1			C	1			B	1			B	2	C	1	C	1
104			C	1			C	1			B	1			B	2	C	1	C	1
105			C	1			C	1			B	1			B	2	C	1	C	1
106			C	1			C	1			B	1			B	1	C	1	C	1
107	C	2	C	2	B	1	B	1	B	1	B	1	B	2	B	2	C	2	C	2
108	C	2	C	2	B	1	B	1	B	1	B	1	B	2	B	2	C	3	C	3
109	C	2	C	2	B	1	B	1	B	1	B	1	B	2	B	2	C	1	C	1
110			C	1			C	1			B	1			B	2	C	1	C	1
112			C	1			C	1			B	1			B	2	C	1	C	1
129			C	1			C	1			B	1			B	1	C	1	C	1
130			C	1			C	1			B	1			B	2	C	1	C	1
150	C	2	C	2	B	1	B	1	B	1	B	1	B	2	B	2	C	3	C	3
153			C	1			C	1			B	1			B	2	C	1	C	1
154			C	1			C	1			B	1			B	2	C	1	C	1
155			C	1			C	1			B	1			B	2	C	1	C	1
156	C	2	C	2	B	1	B	1	B	1	B	1	B	2	B	2	C	3	C	3
157	C	3	C	3	B	1	B	1	B	1	B	1	B	2	B	2	C	2	C	2
158	C	2	C	2	B	1	B	1	B	1	B	1	B	2	B	2	C	2	C	2
159	C	2	C	2	B	1	B	1	B	1	B	1	B	2	B	2	C	3	C	3
160	C	2	C	2	B	1	B	1	B	1	B	1	B	1	B	1	C	1	C	1
167	C	2	C	2	B	1	B	1	B	1	B	1	B	1	B	1	C	2	C	2
168	C	3	C	3	A	1	A	1	B	1	B	1	B	1	B	1	C	3	C	3
169	C	2	C	2	A	1	A	1	B	1	B	1	B	2	B	2	C	2	C	2
170	C	4	C	4	B	1	B	1	B	1	B	1	B	1	B	1	C	2	C	2
172	C	4	C	4	B	0	B	0	B	1	B	1	B	1	B	1	C	1	C	1
173			C	1			C	1			B	1			B	1	C	1	C	1
174	C	3	C	3	B	1	B	1	B	1	B	1	B	2	B	2	C	2	C	2
180	C	3	C	3	B	1	B	1	B	1	B	1	B	2	B	2	C	3	C	3
194			C	1			C	1			B	1			B	1	C	1	C	1
200																				
201																				
202																				
203			C	1			C	1			B	1			B	1	C	1	C	1
204																				
205																				
206			C	1			C	1			B	1			B	1	C	1	C	1
208	C	2	C	2	B	1	B	1	B	1	B	1	B	2	B	2	C	2	C	2
209	C	2	C	2	B	1	B	1	B	1	B	1	B	2	B	2	C	2	C	2
210	C	2	C	2	C	1	C	1	B	1	B	1	B	2	B	2	C	2	C	2
223																				
224																				
235																				
236																				
241	C	2	C	2	B	1	B	1	B	1	B	1	B	1	B	1	C	2	C	2
242	C	3	C	3	A	1	A	1	B	1	B	1	B	2	B	2	C	3	C	3
243			C	1			C	1			B	1			B	1	C	1	C	1
257																				
269																				
270																				
271																				
280																				
281																				
284																				
285																				
287	C	2	C	2	B	1	B	1	B	1	B	1	B	1	B	1	C	2	C	2
288			C	1			C	1			B	1			B	2	C	1	C	1
291			C	1			C	1			B	1			B	1	C	1	C	1
292			C	1			C	1			B	1			B	1	C	1	C	1
294																				
295	C	2	C	2	C	1	C	1	B	1	B	1	B	2	B	2	C	2	C	2
296	C	2	C	2	B	1	B	1	B	1	B	1	B	2	B	2	C	2	C	2
298	C	2	C	2	B	1	B	1	B	1	B	1	B	1	B	1	C	2	C	2
304																				
501																				
529																				
674																				
1001			C	1			C	1			B	1			B	2	C	1	C	1
1002	C	3	C	3	B	1	B	1	B	1	B	1	B	2	B	2	C	3	C	3
1003	C	2	C	2	B	1	B	1	B	1	B	1	B	2	B	2	C	3	C	3
1004	C	2	C	2	A	1	A	1	B	1	B	1	B	2	B	2	C	3	C	3
1005	C	4	C	4	B	1	B	1	B	1	B	1	B	2	B	2	C	3	C	3
1006	C	2	C	2	B	1	B	1	B	1	B	1	B	2	B	2	C	3	C	3
1007			C	1			C	1			B	1			B	2	C	1	C	1
1009			C	1			C	1			B	1			B	2	C	1	C	1
1010	C	4	C	4	B	1	B	1	B	1	B	1	B	2	B	2	C	2	C	2
1011			C	1			C	1			B	1			B	2	C	1	C	1
1012			C	1			C	1			B	1			B	2	C	1	C	1
S1012			#N/A	DeckType?			#N/A	DeckType?			#N/A	DeckType?			#N/A	DeckType?			#N/A	DeckType?

Scroll to the right to adjust effective column diameter (if column type is unknown, enter 1.0 for effective diameter)

Tank ID No.	Leg,pontoon area (orIFR) Code	Quantity	Code	Quantity	Leg,center area (or Double Deck) Code	Quantity	Code	Quantity	Rim Vent Code	Quantity	Code	Quantity	Column, round pipe Code	Quantity	Code	Quantity	Column, built-up Code	Quantity	Code	Quantity	Ladder (vertical) Code	Quantity	Code	Quantity	Effective Column Diameter (feet)	Width (inches)	Length (inches)
21																											
67																											
100	C	23	C	23	C	140	C	140	B	0	B	0			B	0			B	0			B	0			
101	C		C	0	C		C	52	B	0	B	0			B	0			B	0			B	0			
102	C		C	23	C		C	38	B	0	B	0			B	0			B	0			B	0			
104	C		C	0	C		C	46	B	0	B	0			B	0			B	0			B	0			
105	C		C	0	C		C	46	B	0	B	0			B	0			B	0			B	0			
106	C		C	18	C		C	20	B	0	B	0			B	0			B	0			B	0			
107	C		C	0	C	58	C	58	B	0	B	0			B	0			B	0			B	0			
108	C		C	0	C	58	C	58	B	0	B	0			B	0			B	0			B	0			
109	C	26	C	26	C	34	C	34	B	0	B	0			B	0			B	0			B	0			
110	C		C	0	C		C	58	B	0	B	0			B	0			B	0			B	0			
112	C		C	0	C		C	58	B	0	B	0			B	0			B	0			B	0			
129	C		C	19	C		C	24	B	0	B	0			B	0			B	0			B	0			
130	C		C	0	C		C	74	B	0	B	0			B	0			B	0			B	0			
150	C		C	0	C	38	C	38	B	0	B	0			B	0			B	0			B	0			
153	C		C	23	C		C	38	B	0	B	0			B	0			B	0			B	0			
154	C		C	23	C		C	38	B	0	B	0			B	0			B	0			B	0			
155	C		C	0	C		C	40	B	0	B	0			B	0			B	0			B	0			
156	C		C	0	C	28	C	28	B	0	B	0			B	0			B	0			B	0			
157	C		C	0	C	28	C	28	B	0	B	0			B	0			B	0			B	0			
158	C		C	0	C	28	C	28	B	0	B	0			B	0			B	0			B	0			
159	C		C	0	C	42	C	42	B	0	B	0			B	0			B	0			B	0			
160	C		C	0	C	23	C	23	B	0	B	0			B	0			B	0			B	0			
167	C		C	0	C	26	C	26	B	0	B	0			B	0			B	0			B	0			
168	C		C	0	C	24	C	24	B	0	B	0			B	0			B	0			B	0			
169	C		C	0	C	27	C	27	B	0	B	0			B	0			B	0			B	0			
170	C		C	0	C	24	C	24	B	1	B	1			B	0			B	0			B	0			
172	C		C	0	C	24	C	24	B	0	B	0			B	0			B	0			B	0			
173	C		C	18	C		C	20	B	0	B	0			B	0			B	0			B	0			
174	C		C	0	C	24	C	24	B	1	B	1			B	0			B	0			B	0			
180	C		C	0	C	28	C	28	B	0	B	0			B	0			B	0			B	0			
194	C		C	0	C		C	10	B	0	B	0			B	0			B	0			B	0			
200																											
201																											
202																											
203	C		C	19	C		C	24	B	0	B	0			B	0			B	0			B	0			
204																											
205																											
206	C		C	6	C		C	6	B	0	B	0			B	0			B	0			B	0			
208	C		C	0	C	32	C	32	B	0	B	0			B	0			B	0			B	0			
209	C		C	0	C	32	C	32	B	0	B	0			B	0			B	0			B	0			
210	C		C	0	C	32	C	32	B	0	B	0			B	0			B	0			B	0			
223																											
224																											
235																											
236																											
241	C		C	0	C	33	C	33	B	0	B	0			B	0			B	0			B	0			
242	C		C	0	C	28	C	28	B	0	B	0			B	0			B	0			B	0			
243	C		C	0	C		C	34	B	0	B	0			B	0			B	0			B	0			
257																											
269																											
270																											
271																											
280																											
281																											
284																											
285																											
287	C		C	0	C	28	C	28	B	0	B	0			B	0			B	0			B	0			
288	C		C	0	C		C	40	B	0	B	0			B	0			B	0			B	0			
291	C		C	17	C		C	16	B	0	B	0			B	0			B	0			B	0			
292	C		C	17	C		C	16	B	0	B	0			B	0			B	0			B	0			
294																											
295	C		C	0	C	9	C	9	B	0	B	0			B	0			B	0			B	0			
296	C		C	0	C	20	C	20	B	0	B	0			B	0			B	0			B	0			
298	C		C	0	C	14	C	14	B	0	B	0			B	0			B	0			B	0			
304																											
501																											
529																											
674																											
1001	C		C	0	C		C	40	B	0	B	0			B	0			B	0			B	0			
1002	C		C	0	C	40	C	40	B	0	B	0			B	0			B	0			B	0			
1003	C		C	0	C	40	C	40	B	0	B	0			B	0			B	0			B	0			
1004	C		C	0	C	40	C	40	B	0	B	0			B	0			B	0			B	0			
1005	C		C	0	C	28	C	28	B	0	B	0			B	0			B	0			B	0			
1006	C		C	0	C	28	C	28	B	0	B	0			B	0			B	0			B	0			
1007	C		C	0	C		C	74	B	0	B	0			B	0			B	19			B	0			
1009	C		C	20	C		C	28	B	0	B	0			B	0			B	0			B	0			
1010	C		C	0	C	28	C	28	B	1	B	1			B	0			B	0			B	0			
1011	C		C	20	C		C	28	B	0	B	0			B	0			B	0			B	0			
1012	C		C	20	C		C	28	B	0	B	0			B	0			B	0			B	0			
S1012			#N/A	DeckType?			#N/A	DeckType?			#N/A	DeckType?			#N/A	DeckType?			#N/A	DeckType?			#N/A	DeckType?			

Appendix C, Table C-13: Meteorological Data

CTYST	CITY	STATE	A_TEMP_DAA	ATMOS_PRS
Rodeo, California	Rodeo	California	59.95225914	14.7465

	Month	Avg Daily Min Temp	Avg Daily Max Temp	Avg Daily Total Solar Insolation	Avg Wind Speed
1	**JAN**	46.80	57.01	609	4.2
2	**FEB**	44.84	62.47	822	4.6
3	**MAR**	46.33	61.35	1476	4.6
4	**APR**	49.78	65.61	1689	5.4
5	**MAY**	53.06	68.52	2427	7.0
6	**JUN**	55.45	76.49	2511	6.7
7	**JUL**	57.28	78.60	2549	6.9
8	**AUG**	56.68	77.34	2199	6.2
9	**SEP**	55.33	76.52	1735	5.2
10	**OCT**	55.08	74.17	1362	4.2
11	**NOV**	50.54	66.57	723	3.6
12	**DEC**	46.20	56.85	746	4.8
13	ANNUAL	51.45	68.46	1570.42	5.29

Appendix C, Table C-14: Exempt Chemical Tanks Potentials to Emit (PTE) POC and TAC Emissions Calculations

Tank ID	Exemption*	Tank Description	Tank Type	Breather Vent?	Insulation or Vapor recovery?	Storage Pressure	Length (ft)	Width (ft)	Height (ft)	Color	Max Daily Throughput (gal)	Max Annual Throughput (gal)	Max Annual Turnovers
S-607 or S-618	Regulation 2-1-123.2.1	Sulfuric Acid	Tote	Yes	No	Atm	3.58	3.58	6.00	White	400	45,000	112.5
S-611	Regulation 2-1-123.2	Polymer	Tote	Yes	No	Atm	3.58	3.58	6.00	White	400	45,000	112.5

* Regulation 2-1-123.2.1: Sulfuric acid with an acid strength of less than or equal to 99.0% by weight
Regulation 2-1-123.2: Tanks, vessels and pumping equipment used exclusively for the storage or dispensing of any aqueous solution which contains less than 1 percent (wt) organic compounds

<u>Methodology</u>
- TCEQ APDG 6250, worst case short term emissions from a vertical fixed roof tank, adapted to conservatively estimate annual PTE emissions

<u>Assumptions</u>
- Totes will be stored so as not to be susceptable to significant daily temperature changes
- Totes will remain capped and sealed during storage (i.e. no breather vent openings or breathing losses)
- Empty totes will be splash loaded and each filling will occur in less than an hour
- Empty totes are considered to be saturated with vapor for this PTE calculation
- The entire contents of an empty tote are displaced (expelled) with each filling
- H2SO4 is stored in 99% aqueous solution (high end of ranged stated on SDS)
- Material properties of the polymer are represented as Kerosene (i.e., CAS No. 64742-47-8)
- Worst case liquid surface temperature of 85 degF for PTE calculations (30 degC)

Emissions Calculation Results

	Sulfuric Acid S607 or S618	**Polymer S-611**		
Density	15.27	8.6	lb/gal	
POC content	0	24.44	liq wt%	
M_V	98.079	130	vapor mol wt	
P_{VA}	0.000001	0.0058	psia at 30 degrees C	
FR_M	400.00	400.00	gal/hr	
R	80.273	80.273	constant	
T	544.67	544.67	^{o}R (85 ^{o}F)	
L_{MAX}	**9.75E-07**	**0.0069**	**lb/hr (= lb/day, max of 1 filling event per day)**	
POC	**None**	**2.5172**	**lb/yr**	0.001259
H2SO4	**3.56E-04**	**None**	**lb/yr**	**Annual PTE**
Other TACs	**None**	**None**	**lb/yr**	

- Sulfuric Acid partial vapor pressures obtained from Perry's Chemical Engineering Handbook.
- Conversion: 1 bar = 14.5 psia
- Material properties of the polymer, inlcuding the vapor molecular weight and the vapor pressure, are represented as Kerosene (i.e., CAS No. 64742-47-8) per the SDS.

Calculation Procedure

Emissions from loading a VFR tank should be calculated using Equation 1:

Equation 1

$$L_{MAX} = \frac{M_V \times P_{VA}}{R \times T} \times FR_M$$

- L_{MAX} (lb/hr) is the maximum potential short term emission rate at worst case conditions (highest liquid surface temperature, vapor pressure, and fill rate).
- M_V (lb/lbmol) is the vapor molecular weight of the VOC.
- P_{VA} (psia) is the vapor pressure of the tank contents at the worst case temperature.
- FR_M (gal/hr) is the maximum filling rate.
- R ((psia × gal)/(lbmol × °R)) is the ideal gas constant (80.273 for the selected units).
- T (Rankine) is the worst case liquid surface temperature. It is TCEQ practice to use either 95°F (554.67°R) or the actual temperature, whichever is higher.

Appendix C, Table C-15
Potential to Emit (PTE) TAC Emissions - Reg 2-1-316 Analysis for Exempt Chemical Tanks
Phillips 66 Company - San Francisco Refinery, Rodeo, CA

Table 2-5-1 TAC Trigger Levels

Source #	Description	Pollutant	CAS No.	Yearly Total (lbs/yr)	Hourly Total (lbs/hr)	Chronic (lb/yr)		Acute (lb/hr)	
607 or 618	Sulfuric Acid Tank	1,3-Butadiene	106990	--	--	4.8E-01	*Below*	1.5E+00	*Below*
		Benzene	71432	--	--	2.9E+00	*Below*	6.0E-02	*Below*
		Cresol (mixed isomers)	1319773	--	--	2.3E+04	*Below*		
		Ethylbenzene	100414	--	--	3.3E+01	*Below*		
		Hydrogen sulfide	7783064	--	--	3.9E+02	*Below*	9.3E-02	*Below*
		Naphthalene	91203	--	--	2.4E+00	*Below*		
		n-Hexane	110543	--	--	2.7E+05	*Below*		
		PAH (as B(a)P equivalent)	1151	--	--	3.3E-03	*Below*		
		Phenol	108952	--	--	7.7E+03	*Below*	1.3E+01	*Below*
		Propylene	115071	--	--	1.2E+05	*Below*		
		Styrene	100425	--	--	3.5E+04	*Below*	4.6E+01	*Below*
		Sulfuric acid	7664939	3.56E-04	9.75E-07	3.9E+01	*Below*	2.6E-01	*Below*
		Toluene	108883	--	--	1.2E+04	*Below*	8.2E+01	*Below*
		Xylene (mixed isomers)	1330207	--	--	2.7E+04	*Below*	4.9E+01	*Below*
611	Polymer Tank	1,3-Butadiene	106990	--	--	4.8E-01	*Below*	1.5E+00	*Below*
		Benzene	71432	--	--	2.9E+00	*Below*	6.0E-02	*Below*
		Cresol (mixed isomers)	1319773	--	--	2.3E+04	*Below*		
		Ethylbenzene	100414	--	--	3.3E+01	*Below*		
		Hydrogen sulfide	7783064	--	--	3.9E+02	*Below*	9.3E-02	*Below*
		Naphthalene	91203	--	--	2.4E+00	*Below*		
		n-Hexane	110543	--	--	2.7E+05	*Below*		
		PAH (as B(a)P equivalent)	1151	--	--	3.3E-03	*Below*		
		Phenol	108952	--	--	7.7E+03	*Below*	1.3E+01	*Below*
		Propylene	115071	--	--	1.2E+05	*Below*		
		Styrene	100425	--	--	3.5E+04	*Below*	4.6E+01	*Below*
		Sulfuric acid	7664939	--	--	3.9E+01	*Below*	2.6E-01	*Below*
		Toluene	108883	--	--	1.2E+04	*Below*	8.2E+01	*Below*
		Xylene (mixed isomers)	1330207	--	--	2.7E+04	*Below*	4.9E+01	*Below*

Appendix C, Table C-16: Sulfiding Tanks Potential to Emit (PTE) POC and TAC Emissions Calculations

Equipment ID	Description	Equipment Type	Breather Vent?	Insulation or Vapor Recovery?	Diameter (ft)	T/T (ft)	Color	Max Fill Rate (GPM)	Max Daily Comsumed (gal)	Max Annual Throughput (gal)	Max Annual Turnovers
S-619	**Sulfiding Agent Vessel A**	Vessel	No	Flare Gas Recovery, 98% Control Efficiency	9	27	White	50	1,300	474,500	365
S-620	**Sulfiding Agent Vessel B**	Vessel	No	Flare Gas Recovery, 98% Control Efficiency	9	27	White	50	1,300	474,500	365
S-621	**Sulfiding Agent Vessel C**	Vessel	No	Flare Gas Recovery, 98% Control Efficiency	9	27	White	50	1,300	474,500	365

<u>Methodology</u>

- TCEQ APDG 6250, worst case short term emissions from a vertical fixed roof tank, adapted to conservatively estimate annual PTE emissions

<u>Assumptions</u>

- Vessels will not to be susceptable to significant daily temperature changes
- Other than PRV venting, vessels are closed systems (i.e., no breathing losses)
- Empty vessels will be pressure loaded and each filling will occur in less than five hours
- Empty vessels are considered to be saturated with vapor for this PTE calculation
- 98% of contents of an empty vessel are displaced to Flare Gas Recovery with each filling
- Worst case liquid surface temperature of 85 F for PTE calculations (30 C)

Calculation Procedure

Emissions from loading a VFR tank should be calculated using Equation 1:

Equation 1

$$L_{MAX} = \frac{M_V \times P_{VA}}{R \times T} \times FR_M$$

- L_{MAX} (lb/hr) is the maximum potential short term emission rate at worst case conditions (highest liquid surface temperature, vapor pressure, and fill rate).
- M_V (lb/lbmol) is the vapor molecular weight of the VOC.
- P_{VA} (psia) is the vapor pressure of the tank contents at the worst case temperature.
- FR_M (gal/hr) is the maximum filling rate.
- R ((psia × gal)/(lbmol × °R)) is the ideal gas constant (80.273 for the selected units).
- T (Rankine) is the worst case liquid surface temperature. It is TCEQ practice to use either 95°F (554.67°R) or the actual temperature, whichever is higher.

Emissions Calculation Results

	TBPS 454 Sulfiding Agent Vessel A	**TBPS 454 Sulfiding Agent Vessel B**	**TBPS 454 Sulfiding Agent Vessel C**		
Density	8.93	8.93	8.93	lb/gal	
POC content	99%	99%	99%	liq wt%	
M_V	242.5	242.5	242.5	vapor mol wt	
P_{VA}	0.0023	0.0023	0.0023	psia (15.6 Pa per SDS)	
FR_M	3,000	3,000	3,000	gal/hr	
R	80.273	80.273	80.273	constant	
T	544.67	544.67	544.67	^oR (85 ^oF)	
L_{MAX}	**0.0376**	**0.0376**	**0.0376**	**lb/hr (based on limiting fill rate)**	
POC	**5.9544**	**5.9544**	**5.9544**	**lb/yr (based on limiting consumption rate in the process)**	
TBPS	**5.6566**	**5.6566**	**5.6566**	**CAS 68937-96-2, 90-100 wt%, lb/yr**	
Triethylamine	**0.0595**	**0.0595**	**0.0595**	**CAS 121-44-8, 1 wt%, lb/yr**	**Uncontrolled Annual PTE**
Propylene oxide	**0.0595**	**0.0595**	**0.0595**	**CAS 75-56-9, 1 wt%, lb/yr**	
Other TACs	**None**	**None**	**None**	**lb/yr**	
FGR	**98%**	**98%**	**98%**	**Flare Gas Rec. Contr. Eff.**	
POC	**0.1191**	**0.1191**	**0.1191**	**lb/yr (based on limiting consumption rate in the process)**	
TBPS	**0.1131**	**0.1131**	**0.1131**	**CAS 68937-96-2, 90-100 wt%, lb/yr**	
Triethylamine	**0.0012**	**0.0012**	**0.0012**	**CAS 121-44-8, 1 wt%, lb/yr**	**Annual PTE with 98% Flare Gas Recovery**
Propylene oxide	**0.0012**	**0.0012**	**0.0012**	**CAS 75-56-9, 1 wt%, lb/yr**	
Other TACs	**None**	**None**	**None**	**lb/yr**	
POC	**0.00075**	**0.00075**	**0.00075**	**lb/hr (based on limiting fill rate)**	
TBPS	**0.00001**	**0.00001**	**0.00001**	**CAS 68937-96-2, 90-100 wt%, lb/hr**	
Triethylamine	**0.0000002**	**0.0000002**	**0.0000002**	**CAS 121-44-8, 1 wt%, lb/hr**	**Hourly PTE with 98% Flare Gas Recovery**
Propylene oxide	**0.0000002**	**0.0000002**	**0.0000002**	**CAS 75-56-9, 1 wt%, lb/hr**	
Other TACs	**None**	**None**	**None**	**lb/hr**	

- SDS lists 90-100% TBPS in composition but traces of Triethylamine and Propylene Oxide are possible. Assumed 1% for conservative calculation.

Appendix C, Table C-17
Potential to Emit (PTE) TAC Emissions - Reg 2-1-316 Analysis for Exempt Chemical Tanks
Phillips 66 Company - San Francisco Refinery, Rodeo, CA

Source #	Description	Pollutant	CAS No.	Yearly Total (lbs/yr)	Hourly Total (lbs/hr)	Table 2-5-1 TAC Trigger Levels: Chronic (lb/yr)		Table 2-5-1 TAC Trigger Levels: Acute (lb/hr)	
	Sulfiding Agent Vessel A	1,3-Butadiene	106990	--	--	4.8E-01	Below	1.5E+00	Below
		Benzene	71432	--	--	2.9E+00	Below	6.0E-02	Below
		Cresol (mixed isomers)	1319773	--	--	2.3E+04	Below		
		Ethylbenzene	100414	--	--	3.3E+01	Below		
		Hydrogen sulfide	7783064	--	--	3.9E+02	Below	9.3E-02	Below
		Naphthalene	91203	--	--	2.4E+00	Below		
		n-Hexane	110543	--	--	2.7E+05	Below		
		PAH (as B(a)P equivalent)	1151	--	--	3.3E-03	Below		
		Phenol	108952	--	--	7.7E+03	Below	1.3E+01	Below
		Propylene	115071	--	--	1.2E+05	Below		
		Propylene oxide	75569	0.00	1.51E-07	2.2E+01	Below	6.8E+00	Below
		Styrene	100425	--	--	3.5E+04	Below	4.6E+01	Below
		Toluene	108883	--	--	1.2E+04	Below	8.2E+01	Below
		Triethylamine	121448	0.00	1.51E-07	7.7E+03	Below	6.2E+00	Below
		Xylene (mixed isomers)	1330207	--	--	2.7E+04	Below	4.9E+01	Below
	Sulfiding Agent Vessel B	1,3-Butadiene	106990	--	--	4.8E-01	Below	1.5E+00	Below
		Benzene	71432	--	--	2.9E+00	Below	6.0E-02	Below
		Cresol (mixed isomers)	1319773	--	--	2.3E+04	Below		
		Ethylbenzene	100414	--	--	3.3E+01	Below		
		Hydrogen sulfide	7783064	--	--	3.9E+02	Below	9.3E-02	Below
		Naphthalene	91203	--	--	2.4E+00	Below		
		n-Hexane	110543	--	--	2.7E+05	Below		
		PAH (as B(a)P equivalent)	1151	--	--	3.3E-03	Below		
		Phenol	108952	--	--	7.7E+03	Below	1.3E+01	Below
		Propylene	115071	--	--	1.2E+05	Below		
		Propylene oxide	75569	0.00	1.51E-07	2.2E+01	Below	6.8E+00	Below
		Styrene	100425	--	--	3.5E+04	Below	4.6E+01	Below
		Toluene	108883	--	--	1.2E+04	Below	8.2E+01	Below
		Triethylamine	121448	0.00	1.51E-07	7.7E+03	Below	6.2E+00	Below
		Xylene (mixed isomers)	1330207	--	--	2.7E+04	Below	4.9E+01	Below
	Sulfiding Agent Vessel C	1,3-Butadiene	106990	--	--	4.8E-01	Below	1.5E+00	Below
		Benzene	71432	--	--	2.9E+00	Below	6.0E-02	Below
		Cresol (mixed isomers)	1319773	--	--	2.3E+04	Below		
		Ethylbenzene	100414	--	--	3.3E+01	Below		
		Hydrogen sulfide	7783064	--	--	3.9E+02	Below	9.3E-02	Below
		Naphthalene	91203	--	--	2.4E+00	Below		
		n-Hexane	110543	--	--	2.7E+05	Below		
		PAH (as B(a)P equivalent)	1151	--	--	3.3E-03	Below		
		Phenol	108952	--	--	7.7E+03	Below	1.3E+01	Below
		Propylene	115071	--	--	1.2E+05	Below		
		Propylene oxide	75569	0.00	1.51E-07	2.2E+01	Below	6.8E+00	Below
		Styrene	100425	--	--	3.5E+04	Below	4.6E+01	Below
		Toluene	108883	--	--	1.2E+04	Below	8.2E+01	Below
		Triethylamine	121448	0.00	1.51E-07	7.7E+03	Below	6.2E+00	Below
		Xylene (mixed isomers)	1330207	--	--	2.7E+04	Below	4.9E+01	Below