

BLACKWATER HARVEY TOTAL EMISSIONS 2019

O/B Modes	Product Categories	VOC Emissions (lbs.)	TAPs (lbs.)	VOC's (tons)	TAPs (Tons)	T/P (gal)
	Unregulated Products					3,359,556.83
r/c	Coal Tar/Pitch - 2507	239.62	255.46	0.12	0.128	2,987,424.09
	Coal Tar/Pitch - 2508	224.78	239.64	0.11	0.120	3,371,848.84
	Coal Tar/Pitch - 5066	372.10	396.70	0.19	0.198	3,022,196.47
	Loading emissions	919.20	979.96	0.46	0.490	
t/t	CTO	567.01		0.28		2,972,445.74
	Loading emissions	219.10		0.11		
t/t, r/c	All other regulated tanks	117.56		0.06		5,052,686.68
	Loading emissions	5.60		0.00		
ship/barge	V60	209.61		0.10		92,683,319.58
	Loading emissions	1398.60		0.70		
r/c and barge	Asphalt - 2502	1290.66		0.65		12,463,070.41
	Asphalt - 50Ks	8081.09		4.04		146,788,285.51
	Loading emissions	66486.60		33.24		
r/c	Creosote - 5067	39.67	33.19	0.02	0.017	10,198,344.16
	Loading emissions	249.90	209.07	0.12	0.105	
	Total Tons			40.21	1.06	282,899,178
						279,539,621
	Pumps and Valves			0.97		
	Boiler Emissions					
	800 HP			0.63	0.214	
	14.5 MM Btu Process heater			0.34	0.111	
	All Sources (tpy)			0.97	0.325	
	12-Month Average (tpm)			42.15	1.38	
				3.51	0.12	

Total T/P

Regulated Products T/P

2019 Blackwater Harvey Emissions

TK#	CUSTOMER	PRODUCT	Receipts in	
				Gallons
501	CHEVRON	OLOA19178		283,310.497
1201	EMPTY	EMPTY		-
1202	INGEVITY	MORELIFE 5000		-
1203	EMPTY			-
1204	INGEVITY	MORELIFE 5000		58,733.480
1205	EMPTY			-
1206	INGEVITY	MORELIFE 5000		-
1207	EMPTY			-
1501	REG MARKETING	USED COOKING OIL		1,372,132.533
2402	REG MARKETING	USED COOKING OIL		3,621,820.667
2403	-----	FIREWATER		-
2501	INGEVITY	XTOL651		2,428,790.123
2502	PBF	ASPHALT		12,463,070.405
2503	INGEVITY	LIQRENE		1,404,994.530
2505	INGEVITY	CTO		543,655.617
2507	KOPPERS	PET TAR		2,987,424.094
2508	KOPPERS	COAL TAR		3,371,848.842
5051	PBF	VGO		13,442,785.407
5052	PBF	VGO		6,536,140.790
5053	PBF	ASPHALT		21,408,562.568
5054	PBF	VGO		7,307,162.546
5055	PBF	ASPHALT		21,458,324.062
5056	PBF	VGO		8,366,551.980
5057	PBF	ASPHALT		20,822,446.326
5058	PBF	ASPHALT		21,135,510.894
5060	PBF	VGO		7,064,270.161
5061	PBF	VGO		7,775,567.875
5062	PBF	VGO		13,113,432.268
5063	PBF	VGO		13,229,346.527
5064	PBF	VGO		12,617,044.023
5065	INGEVITY	CTO/CAUSTIC		1,954,562.304
5066	INGEVITY	PITCH		3,022,196.471
5067	KOPPERS	CRESOSOTE		10,198,344.163
5068	PBF	ASPHALT		25,957,149.638
5069	PBF	ASPHALT		18,845,010.654
5070	PBF	ASPHALT		17,161,281.364
15-1	SHELL CHEMICAL	J000		-
15-2	SHELL CHEMICAL	ENORDET		-
16-1	EMPTY			-
16-2	EMPTY			-
26-1	EMPTY			-
2506	TEXPAR	#6 OIL		1,503,306.000
2505	TEXPAR	Slurry		1,727,712.000

Total Shipments by Product											
TK#	CUSTOMER	PRODUCT	Shipments (gallons)	Shipments (bbl.)	Mode	Mode	Emissions - Mode 1	Emissions - Mode 2	total emissions Shipments (lbs.)	total emissions Shipments (tons)	Mo. ave. (lbs.)
2403	-----	FIREWATER									
15-1	EMPTY	EMPTY									
15-2	EMPTY	EMPTY									
16-1	EMPTY										
16-2	EMPTY										
26-1	EMPTY										
1201	EMPTY	EMPTY									
1203	EMPTY										
1205	EMPTY										
1207	EMPTY										
1501	EMPTY	EMPTY									
2402	EMPTY	EMPTY									
1202	INGEVITY	MORELIFE 5000	279,896.59	6,664.20	t/t	r/c					
1204	INGEVITY	MORELIFE 5000	79,744.16	1,898.67	t/t	r/c					
1206	INGEVITY	MORELIFE 5000	0.00	0.00	t/t	r/c					
			359,640.75	8,562.87	179820.37		2.8	2.8	5.6	0.0028	0.47
501	CHEVRON	OLOA19178	155,433.73	3,700.80							
2503	INGEVITY	LIQRENE	1,655,205.83	39,409.66	ship						
5067	KOPPERS	CRESOSOTE	9,220,350.55	219,532.16	r/c		249.9		249.9	0.12495	20.83
5066	INGEVITY	PITCH	3,807,054.12	90,644.15	r/c						
2507	KOPPERS	COAL TAR	2,868,441.00	68,296.21	r/c						
2508	KOPPERS	COAL TAR	4,181,399.94	99,557.14	r/c						
			10,856,895.06	258,497.50			919.2		919.2	0.4596	76.60
5065	OLIN	CTO	155,713.21	3,707.46	t/t						
2501	INGEVITY	XTOL651	2,610,981.48	62,166.23	ship						
			2,766,694.69	65,873.68			250.6		250.6	0.1253	20.88
2502	PBF	ASPHALT	12,893,567.01	306,989.69	r/c	barge					
5053	PBF	ASPHALT	21,155,297.63	503,697.56	r/c	barge					
5055	PBF	ASPHALT	21,072,013.24	501,714.60	r/c	barge					
5057	PBF	ASPHALT	20,989,709.59	499,754.99	r/c	barge					
5058	PBF	ASPHALT	21,071,930.06	501,712.62	r/c	barge					
5068	PBF	ASPHALT	27,167,226.98	646,838.74	r/c	barge					
5069	PBF	ASPHALT	19,353,396.78	460,795.16	r/c	barge					
5070	PBF	ASPHALT	18,511,222.40	440,743.39	r/c	barge					
			162,214,363.69	3,862,246.75	81107182		33,243.30	33,243.30	66,486.60	33.24	5,540.55
5051	PBF	VGO	15,305,113.81	364,407.47	barge						
5052	PBF	VGO	5,546,901.82	132,069.09	barge						
5054	PBF	VGO	9,232,976.83	219,832.78	barge						
5056	PBF	VGO	8,643,042.69	205,786.73	barge						
5060	PBF	VGO	5,209,502.30	124,035.77	barge						
5061	PBF	VGO	6,282,867.74	149,592.09	barge						
5062	PBF	VGO	11,236,259.24	267,529.98	barge						
5063	PBF	VGO	13,200,130.87	314,288.83	barge						
5064	PBF	VGO	12,833,575.07	305,561.31	barge						
2505	TEXPAR	SLURRY OIL	2,603,924.00	61,998.19	barge						
2506	TEXPAR	#6 OIL	4,511,741.47	107,422.42	barge						
			94,606,035.84	2,252,524.66			1398.6		1398.6	0.6993	116.55

Vapor Molecular Weight (lb/lb-mole):
 Vapor Pressure at Daily Average Liquid Surface Temperature (psia):
 Net Throughput (gal/mo.):
 Annual Turnovers:
 Turnover Factor:
 Maximum Liquid Volume (gal):
 Tank Diameter (ft):
 Working Loss Product Factor:

84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000
0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064
429,824,5500	1,148,805,7300	1,711,554,1300	824,539,6000	388,396,9300	45,112,1300	419,170,9300	85,282,6700	2,5513	2,5513	2,5513	2,5513	2,5513	2,5513	2,5513
1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425
30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000
106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Total Losses (lb):

9.4397	18.6444	26.5881	15.4208	9.9801	5.2679	9.9041	5.5178	4.0670	4.6905	4.0858	3.9553
--------	---------	---------	---------	--------	--------	--------	--------	--------	--------	--------	--------

Vapor Molecular Weight (lb/lb-mole):
 Vapor Pressure at Daily Average Liquid Surface Temperature (psia):
 Net Throughput (gal/mo):
 Annual Turnovers:
 Turnover Factor:
 Maximum Liquid Volume (gal):
 Maximum Liquid Height (ft):
 Tank Diameter (ft):
 Working Loss Product Factor:

84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000
0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500
419,162.9900	506,385,1400	1,584,620,1100	1,112,933,2600	1,067,655,1200	533,745,2400	889,395,7800	1,024,300,2000	1,251,529,0200	1,639,680,0000	830,019,9600	1,603,643,5800	12,5707	12,5707
12,5707	12,5707	12,5707	12,5707	12,5707	12,5707	12,5707	12,5707	12,5707	12,5707	12,5707	12,5707	12,5707	12,5707
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
991,440,9644	991,440,9644	991,440,9644	991,440,9644	991,440,9644	991,440,9644	991,440,9644	991,440,9644	991,440,9644	991,440,9644	991,440,9644	991,440,9644	991,440,9644	991,440,9644
30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000
75.0000	75.0000	75.0000	75.0000	75.0000	75.0000	75.0000	75.0000	75.0000	75.0000	75.0000	75.0000	75.0000	75.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Total Losses (lb):

45.6831	54.0408	162.2288	114.9366	110.5323	57.0198	92.7064	106.1969	128.7982	167.7348	86.6473	164.1312
---------	---------	----------	----------	----------	---------	---------	----------	----------	----------	---------	----------

1290.66 lb.

	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000
Vapor Molecular Weight (lb/lb-mole):	9,455,693.970013	9,455,693.970013	9,455,693.970013	9,455,693.970013	9,455,693.970013	9,455,693.970013	9,455,693.970013	9,455,693.970013	9,455,693.970013	9,455,693.970013	9,455,693.970013	9,455,693.970013	9,455,693.970013
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500
Net Throughput (gal/mo.):	80.4132	80.4132	80.4132	80.4132	80.4132	80.4132	80.4132	80.4132	80.4132	80.4132	80.4132	80.4132	80.4132
Annual Turnovers:	0.5397	0.5397	0.5397	0.5397	0.5397	0.5397	0.5397	0.5397	0.5397	0.5397	0.5397	0.5397	0.5397
Turnover Factor:	1,980.414.3425	1,980.414.3425	1,980.414.3425	1,980.414.3425	1,980.414.3425	1,980.414.3425	1,980.414.3425	1,980.414.3425	1,980.414.3425	1,980.414.3425	1,980.414.3425	1,980.414.3425	1,980.414.3425
Maximum Liquid Volume (gal):	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000
Maximum Liquid Height (ft):	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000
Tank Diameter (ft):	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Working Loss Product Factor:	523.8099	713.8267	699.6198	839.4147	671.9350	309.4904	630.7163	765.3420	725.6098	627.4989	851.0957	722.7343	

Working Losses (lb):	0.4034	4.5704	3.3111	3.9066	2.8168	2.5423	0.0000	3.0644	5.1484	0.7128	2.7847
Vapor Molecular Weight (lb/lb-mole):	9.0900	9.0900	9.0900	9.0900	9.0900	9.0900	9.0900	9.0900	9.0900	9.0900	9.0900
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0135	0.0135	0.0135	0.0135	0.0135	0.0135	0.0135	0.0135	0.0135	0.0135	0.0135
Net Throughput (gal/mo.):	138,055,0660	1,564,244,3800	1,133,257,5900	1,83,629,9560	1,337,062,7700	964,073,7890	870,118,7220	0.0000	1,048,817,2900	1,762,060,9000	243,946,9160
Annual Turnovers:	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Maximum Liquid Volume (gal):	1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425	1,980,414,3425
Maximum Liquid Volume (ft):	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000
Tank Diameter (ft):	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Total Losses (lb): 1.2420 5.3279 4.1498 1.3481 4.7453 3.6284 3.3809 0.8386 3.8760 5.9870 1.5244 3.6233

39.67 lb VOC
 33.19 lb PAH
 0.02 tpy PAH

Vapor Molecular Weight (lb/lb-mole):
 Vapor Pressure at Daily Average Liquid
 Surface Temperature (psia):
 Net Throughput (gal/mo.):
 Annual Turnovers:
 Turnover Factor:
 Maximum Liquid Volume (gal):
 Maximum Liquid Height (ft):
 Tank Diameter (ft):
 Working Loss Product Factor:

84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000	84.0000
0.0014	0.0014	0.0014	0.0014	0.0014	0.0014	0.0014	0.0014	0.0014	0.0014	0.0014	0.0014	0.0014	0.0014	0.0014	0.0014	0.0014	0.0014	0.0014	0.0014	0.0014
8,233,745.0000	6,477,562.0000	12,028,639.0000	6,265,908.0000	20,913,166.6000	1,905,252.7200	3,698,528.4000	11,848,551.9000	1,408,243.2000	9,808,588.4000	8,660,940.5400	1,434,192.0500	46,8000	46,8000	46,8000	46,8000	46,8000	46,8000	46,8000	46,8000	46,8000
0.8077	0.8077	0.8077	0.8077	0.8077	0.8077	0.8077	0.8077	0.8077	0.8077	0.8077	0.8077	0.8077	0.8077	0.8077	0.8077	0.8077	0.8077	0.8077	0.8077	0.8077
1,980,414.3425	1,980,414.3425	1,980,414.3425	1,980,414.3425	1,980,414.3425	1,980,414.3425	1,980,414.3425	1,980,414.3425	1,980,414.3425	1,980,414.3425	1,980,414.3425	1,980,414.3425	1,980,414.3425	1,980,414.3425	1,980,414.3425	1,980,414.3425	1,980,414.3425	1,980,414.3425	1,980,414.3425	1,980,414.3425	1,980,414.3425
30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000
106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000	106.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Total Losses (lb):

18.6209	14.6483	27.2032	47.2960	4.3088	26.7960	3.1848	22.1825	19.5871	3.2435
---------	---------	---------	---------	--------	---------	--------	---------	---------	--------

209.41 lb VOC