PROCESS UNIT TURNAROUNDS LISTING

Waste Stream ID#	Process Unit Turnaround Stream Description	Controlled Y/N	Water Content >10% Y/N	Waste Stream Type Code	Annual Waste Quantity (Gal)	Range of Benzene Concentration (ppm)	Annual Flow Weighted Avg. Benz. Conc.(ppm)	Annual BQ (Mg)	TAB Component Y/N
LOS30	T63 L.O. Storage Tank	*Y	Y	D	0	714 - 1211	962.5	0.0E+00	N
LOS31	T64 L.O. Storage Tank	*Y	Y	D	0	714 - 1211	962.5	0.0E+00	N
	#5 CONTROL ROOM - 100 VCU								
5CR1	V101E Carbonate Absorber	N	Y	D	75	10 - 14	11.7	3.3E-06	Y
5CR2	V102E Carb. Str./Cond.	N	Y	D	75	0.003 - 0.003	0.003	8.5E-10	Y
5CR12	E101CA Carb. Reb. Heat Exch.	N	Y	D	502	0.003 - 0.003	0.003	5.7E-09	Y
5CR13	E101CB Carb. Reb. Heat Exch.	N	Y	D	502	0.003 - 0.003	0.003	5.7E-09	Y
5CR14	E102C1 Proc. H2O cool HT Exc	N	Y	D	2254	7.4 - 9.8	8.3	7.1E-05	Y
5CR15	E102C2 Proc H2O cool HT Exc	N	Y	D	2254	7.4 - 9.8	8.3	7.1E-05	Y
5CR16	E103CA Carb.Sol. Heat Exch.	N	Y	D	502	9.32 - 11.13	10.2	1.9E-05	Y
5CR17	E103CB Carb. Sol. Heat Exch.	N	Y	D	502	9.32 - 11.13	10.2	1.9E-05	Y
5CR67	P111J Lean Carb. Sol. Pump	N	Y	D	77	0.003 - 0.003	0.003	8.7E-10	Y
5CR68	P111JA Lean Carb. Sol. Pump	N	Y	D	77	0.003 - 0.003	0.003	8.7E-10	Y
5CR69	P113J Direct Condenser Pump	N	Y	D	95	7.4 - 9.8	8.3	3.0E-06	Y
5CR70	P113JA Direct Cond. Pump	N	Y	D	95	7.4 - 9.8	8.3	3.0E-06	Y
5CR73	P662A Rich 100 Carb.Sol.Pump 26.6	N	Y	D	26.6	10 - 14	11.7	1.2E-06	Y
5CR74	P662B New Rich Carb.Sol.Pump	N	Y	D	26.6	10 - 14	11.7	1.2E-06	Y
5CR86	FCV-110 Rich Carb. Flow	N	Y	D	14.2	10 - 14	11.7	6.3E-07	Y
5CR87	FCV-101 Lean Carb.	N	Y	D	20.4	0.003 - 0.003	0.003	2.3E-10	Y
5CR118	LG 101 101-E Level Glass	N	Y	D	1.5	10 - 14	11.7	6.6E-08	Y
5CR119	LT 101 101-E Level Displacer	N	Y	D	4	10 - 14	11.7	1.8E-07	Y
5CR120	LT 101-A 101-E Level D/P	N	Y	D	0.2	10 - 14	11.7	8.9E-09	Y
5CR121	FI 110-A ABS Blowdown	N	Y	D	0.2	10 - 14	11.7	8.9E-09	Y
5CR122	FIC-110 Rich Flow Transmitter	N	Y	D	0.3	10 - 14	11.7	1.3E-08	Y
5CR123	LG102-A Strip Level Glass	N	Y	D	0.5	0.003 - 0.003	0.003	5.7E-12	Y
5CR124	LT 102-A 102-E Strip Level Disp.	N	Y	D	2.5	0.003 - 0.003	0.003	2.8E-11	Y
5CR125	LT 102-B 102-E Strip Level Disp.	N	Y	D	2.5	0.003 - 0.003	0.003	2.8E-11	Y
5CR126	LG 102-B 102-E DC Level Glass	N	Y	D	0.5	7.4 - 9.8	8.3	1.6E-08	Y
5CR127	LT-102-C 102-E DC Level Disp.	N	Y	D	2.5	7.4 - 9.8	8.3	7.9E-08	Y
5CR128	LT 102-D 102-E DC Level Disp.	N	Y	D	2.5	7.4 - 9.8	8.3	7.9E-08	Y
5CR129	FT 102-C D/C To 102-E	N	Y	D	0.1	7.4 - 9.8	8.3	3.1E-09	Y
5CR130	Ft 102-B 102-E D/C Blowdown	N	Y	D	0.12	7.4 - 9.8	8.3	3.8E-09	Y
5CR131	FT 101 Lean To 101-E ABS	N	Y	D	0.3	0.003 - 0.003	0.003	3.4E-12	Y
5CR132	FIC 103 D/C To 102-F	N	Y	D	0.05	7.4 - 9.8	8.3	1.6E-09	Y
	#5 CONTROL ROOM - 600 VCU								
5CR7	VT650 Carb. Absorber	N	Y	D	50	1.9 - 11.0	5	9.5E-07	Y
5CR8	VT651 Cond. Str.&Dir. Cond.	N	Y	D	75	7.4 - 9.8	8.3	2.4E-06	Y
5CR18	E652A Solution Reboiler	N	Y	D	665	0.003 - 0.003	0.003	7.6E-09	Y

*Y - Subpart L Controlled

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U: ton Works
Total Annual benzene (TAB) - 2010
PROCESS UNIT TURNAROUNDS LISTING

Waste Stream ID#	Process Unit Turnaround Stream Description	Controlled Y/N	Water Content >10% Y/N	Waste Stream Type Code	Annual Waste Quantity (Gal)	Range of Benzene Concentration (ppm)	Annual Flow Weighted Avg. Benz. Conc.(ppm)	Annual BQ (Mg)	TAB Component Y/N
5CR19	E652B Solution Reboiler	N	Y	D	665	0.003 - 0.003	0.003	7.6E-09	Y
5CR20	E653 Lean Solution Cooler	N	Y	D	958	0.003 - 0.003	0.003	1.1E-08	Y
5CR21	E654A Carb. Sol. Heat Exch.	N	Y	D	689	0.003 - 0.003	0.003	7.8E-09	Y
5CR22	E654B Carb. Sol. Heat Exch.	N	Y	D	689	0.003 - 0.003	0.003	7.8E-09	Y
5CR23	E655A Process Water Cooler	N	Y	D	910	7.4 - 9.8	8.3	2.9E-05	Y
5CR24	E655B Process Water Cooler	N	Y	D	910	7.4 - 9.8	8.3	2.9E-05	Y
5CR45	P662 Rich Carb. Sol. Pump	N	Y	D	46.9	1.9 - 11.0	5	8.9E-07	Y
5CR46	P663C Rich Carb. Sol. Pump	N	Y	D	53.9	1.9 - 11.0	5	1.0E-06	Y
5CR47	P663 Lean Carb. Sol. Pump	N	Y	D	54.8	0.003 - 0.003	0.003	6.2E-10	Y
5CR48	P663A Lean Carb. Sol. Pump	N	Y	D	54.8	0.003 - 0.003	0.003	6.2E-10	Y
5CR49	P664 Direct Cond. H2O Pump	N	Y	D	79	7.4 - 9.8	8.3	2.5E-06	Y
5CR50	P664A Ditect Cond. H2O Pump	N	Y	D	79	7.4 - 9.8	8.3	2.5E-06	Y
5CR81	LCV-6513 Lean Sol. To T-651	N	Y	D	10.2	0.003 - 0.003	0.003	1.2E-10	Y
5CR82	FCV-6515 Rich to T651 Stripper	N	Y	D	5.2	1.9 - 11.0	5	9.8E-08	Y
5CR90	LCV-6500 T-650 ABS Make Up	N	Y	D	0.5	7.4 - 9.8	8.3	1.6E-08	Y
5CR91	LCV-6516 T-651 Blowdown	N	Y	D	0.5	7.4 - 9.8	8.3	1.6E-08	Y
5CR103	E-654A Relief Valve 3/4"x1"	N	Y	D	2.31	1.9 - 11.0	5	4.4E-08	Y
5CR104	E-654B Relief Valve 3/4"x1"	N	Y	D	2.31	1.9 - 11.0	5	4.4E-08	Y
5CR106	LICA 6500 Abs Level Displacer	N	Y	D	1	1.9 - 11.0	5	1.9E-08	Y
5CR107	LG 6507 ABS Level Glass	N	Y	D	0.5	1.9 - 11.0	5	9.5E-09	Y
5CR108	FR 6513 Level Flow Trans.	N	Y	D	0.4	0.003 - 0.003	0.003	4.5E-12	Y
5CR109	FI 6580 Axi Inj. Water	N	Y	D	0.6	7.4 - 9.8	8.3	1.9E-08	Y
5CR110	FRC 6515 Rich Flow	N	Y	D	0.4	1.9 - 11.0	5	7.6E-09	Y
5CR111	LICA 6513 Stripper Level Disp	N	Y	D	1.5	0.003 - 0.003	0.003	1.7E-11	Y
5CR112	LG 6510 Stripper Level Glass	N	Y	D	0.5	0.003 - 0.003	0.003	5.7E-12	Y
5CR113	LICA 6516 D/C Level Displacer	N	Y	D	1	7.4 - 9.8	8.3	3.1E-08	Y
5CR114	LG 6524 D/C Level Glass	N	Y	D	0.5	7.4 - 9.8	8.3	1.6E-08	Y
5CR115	FI 6556 D/C Flow	N	Y	D	0.32	7.4 - 9.8	8.3	1.0E-08	Y
	#5 CONTROL ROOM - 300 SCOT								
5CR26	E302C1 Quench Col. Cooler	N	Y	D	307	0.04 - 0.13	0.08	9.3E-08	Y
5CR27	E302C2 Quench Col. Cooler	N	Y	D	307	0.04 - 0.13	0.08	9.3E-08	Y
5CR28	E303C1 Lean MDEA SolCooler	N	Y	D	306	<0.005	<0.005	0.0E+00	Y
5CR29	E303C2 Lean MDEA SolCooler	N	Y	D	306	<0.005	<0.005	0.0E+00	Y
5CR30	E304C1 MDEA L/R Sol Exch.	N	Y	D	2394	0.065 - 0.069	0.068	6.2E-07	Y
5CR31	E304C2 MDEA L/R Sol Exch.	N	Y	D	2394	0.065 - 0.069	0.068	6.2E-07	Y
5CR32	E304C3 MDEA L/R Sol Exch.	N	Y	D	2394	0.065 - 0.069	0.068	6.2E-07	Y
5CR33	E305C 303-E Strip.Reboiler	N	Y	D	987	0.065 - 0.069	0.068	2.5E-07	Y
5CR34	P310J Que.Col.Bottoms Pump	N	Y	D	11.5	0.04 - 0.13	0.08	3.5E-09	Y

*Y - Subpart L Controlled

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US [illegible] ion Works
Total Annual Benzene (TAB) - 2010
PROCESS UNIT TURNAROUNDS LISTING

Waste Stream ID#	Process Unit Turnaround Stream Description	Controlled Y/N	Water Content >10% Y/N	Waste Stream Type Code	Annual Waste Quantity (Gal)	Range of Benzene Concentration (ppm)	Annual Flow Weighted Avg. Benz. Conc.(ppm)	Annual BQ (Mg)	TAB Component Y/N
5CR35	P310Ja Que.Col Bottom Pump	N	Y	D	11.5	0.04 - 0.13	0.08	3.5E-09	Y
5CR36	P311J MDEA Rich Sol. Pump	N	Y	D	11.6	0.065 - 0.069	0.068	3.0E-09	Y
5CR37	P312J Lean MDEA Sol. Pump	N	Y	D	20.5	<0.005	<0.005	0	Y
5CR38	P312JA Lean MDEA Sol Pump	N	Y	D	13.3	<0.005	<0.005	0	Y
5CR39	P313J Stripper Accum. Pump	N	Y	D	6	0.028 - 0.16	0.099	2.2E-09	Y
5CR40	P313JA Stripper Accum. Pump	N	Y	D	6	0.028 - 0.16	0.099	2.2E-09	Y
5CR62	301J 300 Axi	N	Y	D	2	0.04 - 0.13	0.08	6.1E-10	Y
5CR75	T301F Stripper Accumulator	N	Y	D	10	0.028 - 0.16	0.099	3.7E-09	Y
5CR76	T304F Acid Gas K/O Drum	N	Y	D	5	0.04 - 0.13	0.08	1.5E-09	Y
5CR78	V301E Quench Column	N	Y	D	50	0.04 - 0.13	0.08	1.5E-08	Y
5CR79	V302E MDEA Absorber	N	Y	D	50	0.065 - 0.069	0.068	1.3E-08	Y
5CR80	V303E MDEA Stripper	N	Y	D	50	<0.005	<0.005	0.0E+00	Y
5CR83	LC-321 304-F Drain Valve	N	Y	D	0.3	0.04 - 0.13	0.08	9.1E-11	Y
5CR92	FRCA-307 301-F Blowdown	N	Y	D	0.4	0.028 - 0.16	0.099	1.5E-10	Y
5CR93	LCV-305 303-E Reflux Flow 319	N	Y	D	0.5	0.028 - 0.16	0.099	1.9E-10	Y
5CR94	LRCA-301 302-E Level Control	N	Y	D	2.6	0.028 - 0.16	0.099	9.7E-10	Y
5CR95	FRCA-305 303-E Lean Flow	N	Y	D	17.9	<0.005	<0.005	0.0E+00	Y
5CR96	FRCA-304 302-E Quench Flow	N	Y	D	17.9	0.04 - 0.13	0.08	5.4E-09	Y
5CR97	LRCA-300 301-E Level	N	Y	D	0.4	0.04 - 0.13	0.08	1.2E-10	Y
5CR98	E302C1S Valve Relief 1"x2"	N	Y	D	2.93	0.04 - 0.13	0.08	8.9E-10	Y
5CR99	E302C2S Valve Relief 1'x2'	N	Y	D	2.93	0.04 - 0.13	0.08	8.9E-10	Y
5CR100	E303C1S Valve Relief 1"x2"	N	Y	D	2.94	0.065 - 0.069	0.068	7.6E-10	Y
5CR101	E303C2S Valve Relief 1"x2"	N	Y	D	2.94	0.065 - 0.069	0.068	7.6E-10	Y
5CR139	LG 315 A&B 301-E Que Level Gl	N	Y	D	1	0.04 - 0.13	0.08	3.0E-10	Y
5CR140	LRCA 300 301-E Level Displ.	N	Y	D	3	0.04 - 0.13	0.08	9.1E-10	Y
5CR141	FRCA 304 301-E Circ. Rate	N	Y	D	0.1	0.04 - 0.13	0.08	3.0E-11	Y
5CR142	LC 321 304-F Level Displacer	N	Y	D	2	0.04 - 0.13	0.08	6.1E-10	Y
5CR143	LG 324-F Level Glass	N	Y	D	0.5	0.04 - 0.13	0.08	1.5E-10	Y
5CR144	HLA 322 304-F Alarm	N	Y	D	0.25	0.04 - 0.13	0.08	7.6E-11	Y
5CR145	HHLA 323 304-F Alarm	N	Y	D	0.25	0.04 - 0.13	0.08	7.6E-11	Y
5CR146	LG 318A 302-E Level Glass	N	Y	D	1	0.065 - 0.069	0.068	2.6E-10	Y
5CR147	LG 318B 302-E Level Glass	N	Y	D	1	0.065 - 0.069	0.068	2.6E-10	Y
5CR148	LRCA 301 302-E Level Displ.	N	Y	D	5.5	0.065 - 0.069	0.068	1.4E-09	Y
5CR149	FRA 311 Rich MDEA Flow Trans.	N	Y	D	0.1	0.065 - 0.069	0.068	2.6E-11	Y
5CR150	FRCA 305 Lean MDEA to 302-E	N	Y	D	0.12	<0.005	<0.005	0.0E+00	Y
5CR151	LG 317 A 303-E Level Displ.	N	Y	D	0.5	<0.005	<0.005	0.0E+00	Y
5CR152	LG 317 B 303-E Level Displ.	N	Y	D	0.5	<0.005	<0.005	0.0E+00	Y
5CR153	LG 317-C 303-E Level Displ.	N	Y	D	0.5	<0.005	<0.005	0.0E+00	Y

*Y - Subpart L Controlled

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UL ton Works
Total Annual Benzene (TAB) - 2010
PROCESS UNIT TURNAROUNDS LISTING

Waste Stream ID#	Process Unit Turnaround Stream Description	Controlled Y/N	Water Content >10% Y/N	Waste Stream Type Code	Annual Waste Quantity (Gal)	Range of Benzene Concentration (ppm)	Annual Flow Weighted Avg. Benz. Conc.(ppm)	Annual BQ (Mg)	TAB Component Y/N
5CR154	LRA 302 303-E Level Displacer	N	Y	D	3.5	<0.005	<0.005	0.0E+00	Y
5CR155	LG 318 307-C Trap Out Level Gl.	N	Y	D	0.5	<0.005	<0.005	0.0E+00	Y
5CR156	LLA 331 307-C Trap Out Low Lev	N	Y	D	0.5	<0.005	<0.005	0.0E+00	Y
5CR157	LC 305 301-F Accum. Displacer	N	Y	D	2	0.028 - 0.16	0.099	7.5E-10	Y
5CR158	LG 326 301-F Level Glass	N	Y	D	0.25	0.028 - 0.16	0.099	9.4E-11	Y
5CR159	FRCA 307 313 J & JA Flow	N	Y	D	0.08	0.028 - 0.16	0.099	3.0E-11	Y
5CR160	FRCA 319 Flow TO 303-E Reflux	N	Y	D	0.1	0.028 - 0.16	0.099	3.7E-11	Y
	#1 BY-PRODUCTS								
1BP-8	D1 #1 Unit Decanter	*Y	Y	D	0	2.37 - 6.41	4.7	0	N
1B/P-9	D2 #1 Unit Decanter	*Y	Y	D	0	2.37 - 6.41	4.7	0	N
1B/P-10	D3 #1 Unit Decanter	*Y	Y	D	0	2.37 - 6.41	4.7	0	N
1B/P-11	D4 #1 Unit Decanter	*Y	Y	D	0	2.37 - 6.41	4.7	0	N
1B/P-12	D5 #1 Unit Decanter	*Y	Y	D	0	2.37 - 6.41	4.7	0.0E+00	Y
1B/P-13	D6 #1 Unit Decanter	*Y	Y	D	0	2.37 - 6.41	4.7	0.0E+00	Y
1B/P-14	D7 #1 Unit Decanter	*Y	Y	D	1382	2.37 - 6.41	4.7	2.5E-05	Y
1B/P-15	D8 #1 Unit Decanter	*Y	Y	D	1382	2.37 - 6.41	4.7	2.5E-05	Y
1B/P-16	D9 #1 Unit Decanter	*Y	Y	D	0	2.37 - 6.41	4.7	0.0E+00	Y
1B/P-17	D10 #1 Unit Decanter	*Y	Y	D	0	2.37 - 6.41	4.7	0.0E+00	Y
1B/P-18	D11 #1 Unit Decanter	*Y	Y	D	0	2.37 - 6.41	4.7	0.0E+00	Y
1B/P-19	D12 #1 Unit Decanter	*Y	Y	D	0	2.37 - 6.41	4.7	0.0E+00	Y
	#2 BY-PRODUCTS								
2B/P-1	D1 #2 Unit Decanter	*Y	Y	D	0	2.37 - 6.41	4.7	0.0E+00	Y
2B/P-2	D2 #2 Unit Decanter	*Y	Y	D	0	2.37 - 6.41	4.7	0.0E+00	Y
2B/P-3	D3 #2 Unit Decanter	*Y	Y	D	0	2.37 - 6.41	4.7	0.0E+00	Y
2B/P-4	D4 #2 Unit Decanter	*Y	Y	D	0	2.37 - 6.41	4.7	0.0E+00	Y
2B/P-5	D5 #2 Unit Decanter	*Y	Y	D	0	2.37 - 6.41	4.7	0.0E+00	Y
2B/P-6	D6 #2 Unit Decanter	*Y	Y	D	1382	2.37 - 6.41	4.7	2.5E-05	Y
2B/P-7	D7 #2 Unit Decanter	*Y	Y	D	0	2.37 - 6.41	4.7	0.0E+00	Y
2B/P-8	D8 #2 Unit Decanter	*Y	Y	D	0	2.37 - 6.41	4.7	0.0E+00	Y
2B/P-9	D11 #2 Unit Decanter	*Y	Y	D	0	2.37 - 6.41	4.7	0.0E+00	Y
2B/P-10	D12 #2 Unit Decanter	*Y	Y	D	0	2.37 - 6.41	4.7	0.0E+00	Y
	Tar Tanks								
TT-1	D13 #2 Tar Tank	*Y	Y	D	0	0 - 82	0.05	0.000000	Y
TT-2	D14 #5 Tar Tank	*Y	Y	D	0	0 - 82	0.05	0.000000	Y
TT-3	D15 #7 Tar Tank	*Y	Y	D	0	0 - 82	0.05	0.000000	Y
	Miscellaneous								
M-1	Primary Cooler	Y	Y	D	0	2.37 -6.41	4.7	0.000000	Y
M-2	Tar tanker overfill	*Y	Y	D	7540	>0.1-0.3	0.2	0.000006	Y

*Y - Subpart L Controlled

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U[illegible] [illegible]ton Works
Total Annual Benzene (TAB) - 2010
PROCESS UNIT TURNAROUNDS LISTING

Waste Stream ID#	Process Unit Turnaround Stream Description	Controlled Y/N	Water Content >10% Y/N	Waste Stream Type Code	Annual Waste Quantity (Gal)	Range of Benzene Concentration (ppm)	Annual Flow Weighted Avg. Benz. Conc.(ppm)	Annual BQ (Mg)	TAB Component Y/N
M-3	Centrifuge from Koppers	Y	Y	D	56503	2.37 -6.41	4.7	0.00101	Y
M-4	Light Oil Tanks, 624	*Y	Y	D	0	89 - 2000	284	0.00000	Y
M-5	decanter cleanout	N	Y	D	1650	38-350	118.2	0.0007382	Y
M-6	Absorber Cleanout	N	Y	D	lp	93 - 221	157	#VALUE!	Y
						Subtotal - Process Unit Turnarounds		#VALUE!	

*Y - Subpart L Controlled

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