

US EPA ARCHIVE DOCUMENT

Data Summary: HCl Production Furnaces, Total Chlorine

	1	2	3	4	5	6	8	13	15	16	17	18	19
2	Source ID	Cond ID	Facility Information		Combustor Information		APCS Detailed Acronym	Hazardous Wastes	Munitions Popping Furnace	Chemical Weapons Demil	Mixed Radioactive Waste	Comm vs Onsite	Gov't
3	Number	Number	Facility Name	City	Combustor Category	Combustor Class							
4													
5													
6	785	785C1	Borden Chemicals and Plastics (Geismar		HCl production furnace	HCl Production Furnace	GC/HE/QC/AT/WS	Liq	No	No	No	OS	No
7	785	785C2	Borden Chemicals and Plastics (Geismar		HCl production furnace	HCl Production Furnace	GC/HE/QC/AT/WS	Liq	No	No	No	OS	No
8	785	785C3	Borden Chemicals and Plastics (Geismar		HCl production furnace	HCl Production Furnace	GC/HE/QC/AT/WS	Liq	No	No	No	OS	No
9	788	788C1	Dow Chemical Company	Freeport	HCl production furnace	HCl Production Furnace	MGCLREC/VS/SEP/DM	Liq	No	No	No	OS	No
10	845	845C1	Dow Chemical Company	Freeport	HCl production furnace	HCl Production Furnace	WHB/Q/HCLABS/VS/WS	Liq	No	No	No	OS	No
11	851	851C1	The Dow Chemical Company	Pittsburg	HCl production furnace	HCl Production Furnace	Q/HCIABS/WS	Liq	No	No	No	OS	No
12	851	851C3	The Dow Chemical Company	Pittsburg	HCl production furnace	HCl Production Furnace	Q/HCIABS/WS	Liq	No	No	No	OS	No
13	853	853C12	Dupont Dow Elastomers	LaPlace	HCl production furnace	HCl Production Furnace	WQ/3STGHCIABS/S/CWS	Liq	No	No	No	OS	No
14	854	854C1	Eastman Chemical Company, Lr Longview		HCl production furnace	HCl Production Furnace	QT/ABS/WS	Liq	No	No	No	OS	No
15	854	854C2	Eastman Chemical Company, Lr Longview		HCl production furnace	HCl Production Furnace	QT/ABS/WS	Liq	No	No	No	OS	No
16	855	855C11	Georgia Gulf Chemicals and Vin Plaquemine		HCl production furnace	HCl Production Furnace	WHB/4STGHCIABS/CWS	Liq	No	No	No	OS	No
17	855	855C12	Georgia Gulf Chemicals and Vin Plaquemine		HCl production furnace	HCl Production Furnace	WHB/4STGHCIABS/CWS	Liq	No	No	No	OS	No
18	855	855C13	Georgia Gulf Chemicals and Vin Plaquemine		HCl production furnace	HCl Production Furnace	WHB/4STGHCIABS/CWS	Liq	No	No	No	OS	No
19	2005	2005C1	Vulcan Materials Co.	Geismar	HCl production furnace	HCl Production Furnace	WHB/QT/WS	Liq	No	No	No	OS	No
20	2005	2005C2	Vulcan Materials Co.	Geismar	HCl production furnace	HCl Production Furnace	WHB/QT/WS	Liq	No	No	No	OS	No
21	2005	2005C3	Vulcan Materials Co.	Geismar	HCl production furnace	HCl Production Furnace	WHB/QT/WS	Liq	No	No	No	OS	No
22	2005	2005C4	Vulcan Materials Co.	Geismar	HCl production furnace	HCl Production Furnace	WHB/QT/WS	Liq	No	No	No	OS	No
23	2018	2018C3	Dow Chemical Company	Freeport	HCl production furnace	HCl Production Furnace	WHB/VS/Q/HCLABS/VS/CLWS	Liq	No	No	No	OS	No
24	2022	2022C1	PPG Industries, Inc.	Lake Charles	HCl production furnace	HCl Production Furnace	WHB, WS	Liq	No	No	No	OS	No
25	2022	2022C2	PPG Industries, Inc.	Lake Charles	HCl production furnace	HCl Production Furnace	WHB, WS	Liq	No	No	No	OS	No
26	2022	2022C3	PPG Industries, Inc.	Lake Charles	HCl production furnace	HCl Production Furnace	WHB, WS	Liq	No	No	No	OS	No
27													
28													
29	Sources Shutdown or No Longer Burning Hazardous Wastes												
30	786	786C1	Dow Chemical Company	Freeport	HCl production furnace	HCl Production Furnace	DQ/HCLABS/VS/CLWS	Liq	No	No	No	OS	No
31	842	842C1	Dow Chemical Company	Freeport	HCl production furnace	HCl Production Furnace	WHB/HCLABS/WS	Liq	No	No	No	OS	No
32	844	844C4	Dow Chemical Company	Freeport	HCl production furnace	HCl Production Furnace	WHB/HCLABS/WS	Liq	No	No	No	OS	No
33	848	848C1	Dow Chemical Company	Freeport	HCl production furnace	HCl Production Furnace	WHB/HCIABS/CWS	Liq	No	No	No	OS	No
34	2017	2017C1	Dow Chemical Company	Freeport	HCl production furnace	HCl Production Furnace	WHB/Q/HCIABS/VE/CLWS	Liq	No	No	No	OS	No
35	2017A	2017C1	Dow Chemical Company	Freeport	HCl production furnace	HCl Production Furnace	WHB/Q/HCIABS/VE/CLWS	Liq	No	No	No	OS	No
36	2020	2020C1	Dow Chemical Company	Freeport	HCl production furnace	HCl Production Furnace	WHB/VS/WS	Liq	No	No	No	OS	No

Data Summary: HCl Production Furnaces, Total Chlorine

	2	20	21	22	25	30	31	32	33	34	35	36	37	38	57	58	
2	Cond ID	Condition Information			Spiking	Tier	Cl Emissions			Total Cl Stack Emission (ppmv) - ND in %							
3	Number	Cond	Cond Description				Campaign	Rating	Comments	R1		R2		R3		Cond Avg	
4		Dates					Number			ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss
5																	
6	785C1	4/1/1998	CoC; Low scrubber pH		Y	3	1	IB			79.7		50.7		53.3		61.2
7	785C2	4/1/1998	CoC; High scrubber pH		Y	3	1	CT			144.8		139.9		137.8		140.8
8	785C3	4/1/1998	CoC; Lower scrubber recirculation rate, low scrubber pH		Y	3	1	IB			39.7		70.8		91.8		67.4
9	788C1	11/1/1997	Trial burn, max feed rate and comb temp		Y	3	1	CT			2.2		11.0		2.3		5.1
10	845C1	4/1/1998	Trial burn, max waste feed rate, max ash and Cr		Y	3	1	CT			2.6		2.9		2.5		2.7
11	851C1	10/31/1995	Trial burn, max comb chamber temp		Y	3	1	CT			18.4		23.8		30.7		24.3
12	851C3	9/30/1995	Risk burn, normal operating conditions		N		1	N			10.9		14.4		19.8		15.1
13	853C12	9/1/1997	Supplemental trial burn test		Y	3	1	CT			501.7		491.7		493.6		495.7
14	854C1	6/1/1998	Trial burn, worst case for organics destruction		Y	3	1	CT			118.2		109.3		117.7		115.1
15	854C2	9/1/1996	CoC, max waste, metals, Cl, prod rate		Y	3	2	NA	NE; only considering		154.2		171.6		19.0		110.0
16	855C11	4/1/1995	Louisiana Air Permit Compliance Testing		Y	3	1	CT			19.0		13.5		14.9		15.8
17	855C12	3/1/1990	Trial burn -- Heavy liquid and wet/dry vent streams		Y	3	2	NA	NE; only considering		119.2		24.9		59.8		68.0
18	855C13	3/1/1990	Trial burn -- Heavy liquid and wet/dry vent streams		Y	3	2	NA	NE; only considering		118.9		77.9		114.8		103.9
19	2005C1	2/1/1990	Trial burn -- max hex feed to burner No. 1 only		Y	3	1	IB			4.1		3.1		2.7		3.3
20	2005C2	2/1/1990	Trial burn -- max D-40 groundwater phase feed to burner No. 2 only		Y	3	1	IB			1.1		1.7		1.0		1.2
21	2005C3	2/1/1990	Trial burn -- similar to cond 1 but at lower feedrate		Y	3	1	IB			1.0		5.5		5.7		4.1
22	2005C4	2/1/1990	Trial burn -- operation with both feeds and both burners		Y	3	1	CT			8.4		7.1		84.1		33.2
23	2018C3	1/1/1997	COC burn, max waste feed and production rate, max comb temp, min APCS		Y	3	1	CT			0.7		0.3		0.1		0.4
24	2022C1	5/1/2001	Trial burn, min comb temp		Y	3	1	IB			31.6		29.2		33.3		31.3
25	2022C2	5/1/2001	Trial burn, increased PCB feed rate		Y	3	1	IB			26.9		38.2		23.5		29.5
26	2022C3	5/1/2001	Normal comb temp		Y	3	1	CT			68.0		43.1		43.6		51.6
27																	
28																	
29	shutdown or l																
30	786C1	8/1/1998	Trial burn, max waste feed and prod rate, max comb temp, min APCS		Y	3	1	CT			0.7		3.1		1.1		1.6
31	842C1	5/1/1998	Trial burn, max prod rate, min APCS, thermal capacity, max waste feed rate		Y	3	1	CT		1	18.5	1	16.9	1	19.1	1	18.1
32	844C4	4/1/1997	COC burn, max waste feed and production rate, max comb temp, min APCS		Y	3	1	CT			3.4		3.7		1.7		2.9
33	848C1	6/1/1998	Trial burn, max waste feed rate and comb temp, min APCS		Y	3	1	CT			2.4		2.2		1.9		2.2
34	2017C1	2/1/1998	Trial burn, max prod rate, min APCS, max waste feed rate		Y	3	1	CT			0.5		0.5		0.6		0.6
35	2017C1	2/1/1998	Trial burn, max prod rate, min APCS, max waste feed rate		Y	3	1	NA	Data in lieu		0.5		0.5		0.6		0.6
36	2020C1	2/1/1999	Trial burn, max waste feed, max op temp and prod rate, min APCS dP		Y	3	1	CT		100	0.5	14	0.7	79	0.5	60	0.6

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	2	61	62	63	64	65	66	67	68	69	82	83	86	87	88	89	90	91	104	105	108	109	110	112	113	
2	Cond ID	CI SRE			CI SRE (%)				CI SRE Used for Ranking Purposes (%)				CI Feedrate, Cond Avg (ug/dscm)													
3	Number	Campaign	Rating	Comment	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	HW	Spike	RM	MF	Total									
4	Number	Number																								
5																										
6	785C1	1	IB		99.8383	99.9037	99.8892	99.8776	99.8383	99.9037	99.8892	99.8776	75,795,102												75,795,102	
7	785C2	1	CT		99.7359	99.6689	99.7343	99.7163	99.7359	99.6689	99.7343	99.7163	75,264,276												75,264,276	
8	785C3	1	IB		99.9313	99.8775	99.8412	99.8833	99.9313	99.8775	99.8412	99.8833	86,023,134												87,618,456	
9	788C1	1	CT		99.9986	99.9938	99.9986	99.9970	99.9986	99.9938	99.9986	99.9970	253,539,427	4,234,201											257,779,958	
10	845C1	1	CT		99.9963	99.9956	99.9962	99.9960	99.9963	99.9956	99.9962	99.9960	101,311,524									1,314,220			102,625,744	
11	851C1	1	CT		99.9908	99.9878	99.9835	99.9875	99.9908	99.9878	99.9835	99.9875	64,157,432	230,102,537											294,259,969	
12	851C3	1	NA	Normal	99.9637	99.9496	99.9380	99.9500	99.9637	99.9496	99.9380	99.9500	45,801,195												45,801,195	
13	853C12	1	CT		98.9902	98.9427	98.9672	98.9674	98.9902	98.9427	98.9672	98.9674	72,775,235												72,775,235	
14	854C1	1	CT		99.7717	99.7801	99.7462	99.7662	99.7717	99.7801	99.7462	99.7662	71,627,162	416,852									2,582,243			74,626,257
15	854C2	2	NA	Old data	99.6006	99.6340	99.9469	99.7246	99.6006	99.6340	99.9469	99.7246	60,522,189												60,522,189	
16	855C11																									
17	855C12	1	IB		99.8471	99.9729	99.9345	99.9219	99.8471	99.9729	99.9345	99.9219	131,938,264												131,938,264	
18	855C13	1	CT		99.8389	99.9031	99.8498	99.8649	99.8389	99.9031	99.8498	99.8649	116,546,075												116,546,075	
19	2005C1	1	IB		99.9953	99.9965	99.9971	99.9963	99.9953	99.9965	99.9971	99.9963	133,554,548												133,554,548	
20	2005C2	1	IB		99.9985	99.9973	99.9985	99.9981	99.9985	99.9973	99.9985	99.9981	99,716,600												99,716,600	
21	2005C3	1	IB		99.9985	99.9915	99.9915	99.9939	99.9985	99.9915	99.9915	99.9939	101,429,211												101,429,211	
22	2005C4	1	CT		99.9925	99.9940	99.9241	99.9708	99.9925	99.9940	99.9241	99.9708	84,803,709									87,327,112			172,130,821	
23	2018C3	1	CT		99.9988	99.9995	99.9998	99.9994	99.9988	99.9995	99.9998	99.9994	92,332,941	0											92,332,941	
24	2022C1	1	IB					99.9766					99.9766	202,686,827											202,686,827	
25	2022C2	1	IB					99.9662					99.9662	132,405,149											132,405,149	
26	2022C3	1	CT					99.9565					99.9565	179,725,481											179,725,481	
27																										
28																										
29	Shutdown or l																									
30	786C1	1	CT		99.9993	99.9971	99.9990	99.9985	99.9993	99.9971	99.9990	99.9985	161,119,452												161,119,452	
31	842C1	1	CT	>	99.9747	>	99.9789	>	99.9742	>	99.9761	>	99.9747	>	99.9789	>	99.9742	>	99.9761	114,873,788					114,873,788	
32	844C4	1	CT		99.9894	99.9912	99.9959	99.9924	99.9894	99.9912	99.9959	99.9924	58,927,695												58,927,695	
33	848C1	1	CT		99.9963	99.9965	99.9970	99.9966	99.9963	99.9965	99.9970	99.9966	96,861,524												96,861,524	
34	2017C1	1	CT		99.9996	99.9995	99.9995	99.9995	99.9996	99.9995	99.9995	99.9995	85,592,723										87,873,042			173,465,764
35	2017C1	1	NA	Data in lieu	99.9996	99.9995	99.9995	99.9995	99.9996	99.9995	99.9995	99.9995	85,592,723											87,873,042		173,465,764
36	2020C1	1	CT		99.9949	99.9933		99.9940	99.9949	99.9933		99.9940	504,825	13,613,386											14,118,211	

Data Summary: HCl Production Furnaces, Total Chlorine

2	114	115	116	117	118	119	138	139	140	141	142	143	144	145	164	165	166	168	169	170	171	172	173	
2	Cond ID	Chlorine Total Feedrate (ug/dscm) - By Runs							Chlorine HW + Spike Feedrate (ug/dscm) - By Runs							Thermal Feed (MMBtu/hr) Cond Avg				Thermal Emiss Rating				
3	Number	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	HW	Misc Fuel	Total	Est Tot	Camp	Rating	Comments								
4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No	No	No	
5																								
6	785C1	74,694,662	79,793,657	72,896,987	75,795,102	0	74694662	0	79793657	0	72896987	0	75795102	20.5	0.0	20.5	26.6	1	IB					
7	785C2	83,122,848	64,040,878	78,629,101	75,264,276	0	83122848	0	64040878	0	78629101	0	75264276	20.3	0.0	20.3	27.2	1	CT					
8	785C3	87,618,456	87,618,456	87,618,456	87,618,456	0	87618456	0	84894671	0	85556276	0	86023134	21.6	0.0	21.6	27.4	1	IB					
9	788C1	0	249,501,409	0	268,018,317	0	255,820,147	0	257,779,958	0	2.5E+08	0	2.68E+08	0	2.56E+08	0	2.58E+08	82.7	0.0	82.7	63.1	1	CT	
10	845C1	105,993,726	101,411,042	100,472,463	102,625,744	0	1.05E+08	0	1E+08	0	99158645	0	1.01E+08	39.3	5.0	44.6	52.5	1	CT					
11	851C1	0	304,194,811	0	296,589,941	0	282,645,687	0	294,259,969	0	3.04E+08	0	2.97E+08	0	2.83E+08	0	2.94E+08	4.1	1.4	5.5	5.8	1	CT	
12	851C3	0	45,736,424	0	43,248,557	0	48,418,604	0	45,801,195	0	45736424	0	43248557	0	48418604	0	45801195	1.8	1.6	3.4	4.7	1	NA	Keep as nor
13	853C12	75,328,141	70,504,655	72,452,689	72,775,235	0	75328141	0	70504655	0	72452689	0	72775235	43.2	0.0	43.2	39.5	1	CT					
14	854C1	78,511,349	75,373,773	70,315,078	74,626,257	0	75806278	0	72508768	0	68106389	0	72044014	4.7	5.6	10.3	13.5	1	CT					
15	854C2	58,537,627	71,075,229	54,214,826	60,522,189	0	58537627	0	71075229	0	54214826	0	60522189	9.3	6.0	15.6	14.4	2	NA			Older data		
16	855C11													0.0	0.0									
17	855C12	118,175,556	139,346,820	138,292,418	131,938,264	0	1.18E+08	0	1.39E+08	0	1.38E+08	0	1.32E+08	42.6	0.0	42.6	40.8	1	IB					
18	855C13	111,899,978	121,839,715	115,898,533	116,546,075	0	1.12E+08	0	1.22E+08	0	1.16E+08	0	1.17E+08	42.6	0.0	42.6	42.0	1	CT					
19	2005C1	130,711,792	131,454,559	138,497,292	133,554,548	0	1.31E+08	0	1.31E+08	0	1.38E+08	0	1.34E+08	9.1	0.0	9.1	15.3	1	IB					
20	2005C2	104,865,798	96,802,477	99,369,049	99,716,600	0	1.05E+08	0	96802477	0	99369049	0	99716600	6.4	0.0	6.4	16.6	1	IB					
21	2005C3	105,830,703	98,173,909	101,550,553	101,429,211	0	1.06E+08	0	98173909	0	1.02E+08	0	1.01E+08	7.4	0.0	7.4	16.4	1	IB					
22	2005C4	170,553,728	177,864,109	167,974,625	172,130,821	0	84453220	0	88437426	0	81520480	0	84803709	5.6	5.3	10.9	15.6	1	CT					
23	2018C3	93,580,683	90,593,300	92,824,839	92,332,941	0	93580683	0	90593300	0	92824839	0	92332941	43.8	1.8	45.5	33.0	1	CT					
24	2022C1				202,686,827								0	2.03E+08	19.0	9.9	28.9	49.5	1	IB				
25	2022C2				132,405,149								0	1.32E+08	50.6	0.8	51.3	52.0	1	IB				
26	2022C3				179,725,481								0	1.8E+08	16.9	17.3	34.2	54.6	1	CT				
27																								
28																								
29	shutdown or l																							
30	786C1	0	158,683,822	0	162,335,693	0	162,338,839	0	161,119,452					21.2	0.3	21.5	27.5	1	CT					
31	842C1	110,658,273	121,417,466	112,545,626	114,873,788									13.5	0.0	13.5	17.2	1	CT					
32	844C4	48,999,580	63,708,261	64,075,244	58,927,695									33.0	5.0	38.0	32.4	1	CT					
33	848C1	0	97,313,809	0	96,443,651	0	96,827,111	0	96,861,524					15.9	5.5		21.9	1	CT					
34	2017C1	178,141,541	172,873,407	172,743,412	173,465,764									33.5	0.5	34.0	43.2	1	CT					
35	2017C1	178,141,541	172,873,407	172,743,412	173,465,764									33.5	0.5	34.0	43.2	1	NA			Data in lieu		
36	2020C1	15,668,848	14,901,438	12,288,792	14,118,211									41.9	0.0	41.9	46.3	1	CT					

Data Summary: HCl Production Furnaces, Total Chlorine

	2	175	177	179	189	191	193	195	205
2	Cond ID	Chlor HW Thermal Emiss (lb/10 ⁹ Btu)				Chlorine in HW (lb/MMBtu)			
3	Number	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg
4									
5									
6	785C1	144.1	76.1	90.0	103.4	89.2	79.1	81.3	83.2
7	785C2	222.0	261.1	241.2	241.4	84.1	78.9	90.8	84.6
8	785C3	60.5	119.4	144.8	108.2	88.1	97.5	91.2	92.2
9	788C1	2.2	10.4	2.3	5.0	162.8	166.2	167.5	165.5
10	845C1	4.2	4.8	4.2	4.4	113.6	111.0	111.0	111.9
11	851C1	31.0	43.1	57.0	43.7	337.5	354.3	345.7	345.8
12	851C3	36.1	49.3	64.2	49.9	99.5	97.9	103.6	100.3
13	853C12	60.6	596.2	517.5	391.4	6.0	56.4	50.1	37.5
14	854C1	353.0	401.8	424.5	393.1	154.6	182.7	167.3	168.2
15	854C2	322.5	293.0	39.4	218.3	80.7	80.1	74.2	78.3
16	855C11								
17	855C12	159.9	28.6	68.5	85.7	104.6	105.7	104.5	104.9
18	855C13	152.6	94.9	145.3	130.9	94.7	97.9	96.8	96.5
19	2005C1	8.7	6.6	5.6	7.0	185.7	186.9	191.4	188.0
20	2005C2	3.4	5.4	2.9	3.9	223.1	199.2	202.2	208.1
21	2005C3	2.5	16.0	17.6	12.1	175.4	188.2	207.5	190.4
22	2005C4	14.7	11.4	131.1	52.4	196.4	189.6	172.7	186.3
23	2018C3	0.7	0.3	0.1	0.4	58.7	56.4	60.8	58.7
24	2022C1								426.1
25	2022C2								114.7
26	2022C3								487.7
27									
28									
29	Shutdown or I								
30	786C1	1.9	5.0	1.3	2.7	287.0	175.2	126.6	196.2
31	842C1	31.4	25.8	31.8	29.7	124.1	122.1	123.5	123.2
32	844C4	4.4	4.6	2.1	3.7	41.9	52.3	51.4	48.5
33	848C1	4.1	3.9	3.4	3.8	110.5	111.3	114.1	111.9
34	2017C1	0.4	0.4	0.5	0.5	95.4	92.3	92.9	93.5
35	2017C1	0.4	0.4	0.5	0.5	95.4	92.3	92.9	93.5
36	2020C1	0.7	0.9		0.8	14.1	13.5	0.0	9.2