

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase I ID No.	604
4	EPA ID No.	LAD040776809
5	Facility Name	BASF
6	Facility Location	
7	City	Geismar
8	State	LA
9	Unit ID Name/No.	Aniline incinerator
10	Other Sister Facilities	none
11	Number of Sister Facilities	0
12	Combustor Class	Onsite incinerator
13	Combustor Type	Liquid injection
14	Combustor Characteristics	3 combustion chamber, low-NOx via recycled flue gas burning John Zinc, horizontal, liquid incinerator, 3 comb zones (reduction furnace, quench zone, reoxidation chamber) w/waste heat boiler/economizer; flue gas recycled from economizer outlet to reduction furnace
15		
16	Capacity (MMBtu/hr)	24.2 MMBtu/hr
17	Soot Blowing	
18	APCS Detailed Acronym	WQ/VS/DM
19	APCS General Class	WQ,HEWS
20	APCS Characteristics	Spray contactor/quench tank, hydrosonics 2-stage venturi scrubber, mist eliminator
21	Hazardous Wastes	Liq.
22	Haz Waste Description	Aniline and mononitrobenzene (MNB) process liquid wastes
23	Supplemental Fuel	Natural gas
24		
25	Stack Characteristics	
26	Diameter (ft)	2.00
27	Height (ft)	40
28	Gas Velocity (ft/sec)	21.9
29	Gas Temperature (°F)	149
30		
31	Permitting Status	
32	HWC Burn Status (Date if Terminated)	

	B	C
1	Condition Description	
2		
3	604C10	
4		
5	Report Name/Date	Test Report for the Trial Burn on the Aniline Incinerator at BASF Corp. in Geismar, LA , Final Report, December 1992.
6	Report Preparer	Midwest Research Institute
7	Testing Firm	Midwest Research Institute
8	Testing Dates	Sept 15-17, 1992
9	Cond Dates	Sep-92
10	Condition Descr	Trial burn (initial)
11	Content	PM, metals, DRE, NOx/CO/THC, VOC/PICs, metal feeds

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Stack Gas Emissions													
2														
3		Commer Units		7% O2										
4														
5	604C10	Trial Burn				R1	R2	R3		R4		Cond Avg		
6														
7	CO (RA)	E1	ppmv	y		1	1	1		3		1.5		
8	CO (MHRA)	E1	ppmv	y	nd	5 nd	5 nd	5 nd		10 nd		6.3		
9														
10	PM	E1	gr/dscf	y		0.0033	0.004	0.0025		0.0034		0.0033		
11														
12	NOx		ppmv	y		19	19	17		19		18.4		
13	HC(RA)		ppmv	y		0	0	0		0		0.0		
14														
15	POHC -1		Benzene											
16	POHC Feedrate		g/min			197	183	191		185				
17	Emission Rate	E1	g/min			1.40E-03 nd	1.85E-03 nd	1.84E-03		2.28E-03				
18	DRE	E1	%			99.99929 >	99.99899 >	99.99904		99.99877				
19														
20	POHC - 2		Mononitrobenzene											
21	POHC Feedrate		g/min			1998	1998	2045		2092				
22	Emission Rate	E1	g/min		nd	6.80E-04 nd	7.30E-04 nd	7.40E-04 nd		7.50E-04				
23	DRE	E1	%		>	99.99997 >	99.99996 >	99.99996 >		99.99996 >				
24														
25														
26	Antimony		ug/dscm	n	nd	11.5 nd	12.6 nd	12.5 nd		13.6				
27	Arsenic		ug/dscm	n		0.458	0.28	0.194		0.188				
28	Barium		ug/dscm	n		51.3	57.4	52.7		57.8				
29	Beryllium		ug/dscm	n	nd	0.094 nd	0.103 nd	0.103 nd		0.11				
30	Cadmium		ug/dscm	n		0.777	5.83 nd	0.83 nd		1.03				
31	Chromium		ug/dscm	n		18.1	15.8	15		17				
32	Chromium(Hex)		ug/dscm	n		2.1	1.76	1.8		1.79				
33	Copper		ug/dscm	n		1741	1839	1536		1550				
34	Lead		ug/dscm	n		2.96	3.48	4.89		2.01				
35	Mercury		ug/dscm	n	nd	0.928 nd	1.21 nd	1.04 nd		0.768				
36	Nickel		ug/dscm	n		12.4	12.900	18.700		13.9				
37	Selenium		ug/dscm	n	nd	8.78 nd	9.46 nd	9.31 nd		10.1				
38	Silver		ug/dscm	n		13.3 nd	9.74 nd	9.69 nd		10.3				
39	Thallium		ug/dscm	n	nd	9.96 nd	11 nd	10.9 nd		11.7				
40														
41	Sampling Train		Avg of 3 E1											
42	Stack Gas Flowrate		dscfm			4170	4170	4134		4064		4134		
43	O2		%			3.6	3.7	3.6		3.7		3.7		
44	Moisture		%			23.3	22.9	23.4		24.4		23.5		
45	Temperature		°F			148	148	148		152		149		
46														
47	Antimony	E1	ug/dscm	y	nd	9.3 nd	10.2 nd	10.1 nd		11.0		10.1		
48	Arsenic	E1	ug/dscm	y		0.4	0.2	0.2		0.2		0.2		
49	Barium	E1	ug/dscm	y		41.3	46.5	42.4		46.8		44.2		
50	Beryllium	E1	ug/dscm	y	nd	0.1 nd	0.1 nd	0.1 nd		0.1		0.1		
51	Cadmium	E1	ug/dscm	y		0.6	4.7 nd	0.7 nd		0.8		1.7		
52	Chromium	E1	ug/dscm	y		14.6	12.8	12.1		13.8		13.3		
53	Chromium (Hex)	E1	ug/dscm	y		1.7	1.4	1.4		1.4		1.5		
54	Copper	E1	ug/dscm	y		1401	1488	1236		1254		1344.8		
55	Lead	E1	ug/dscm	y		2.4	2.8	3.9		1.6		2.7		
56	Mercury	E1	ug/dscm	y	nd	0.7 nd	1.0 nd	0.8 nd		0.6 100		0.4		
57	Nickel	E1	ug/dscm	y		10.0	10.4	15.0		11.2		11.7		
58	Selenium	E1	ug/dscm	y	nd	7.1 nd	7.7 nd	7.5 nd		8.2		7.6		
59	Silver	E1	ug/dscm	y		10.7 nd	7.9 nd	7.8 nd		8.3		8.7		
60	Thallium	E1	ug/dscm	y	nd	8.0 nd	8.9 nd	8.8 nd		9.5		8.8		
61														
62	SVM	E1	ug/dscm	y		3.0	7.5 16	4.3 34		2.5 8.7		4.3		
63	LVM	E1	ug/dscm	y	1	15.0 1	13.1 1	12.3 0.6		14.0		13.6		

	B	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU
1	Feedrate Calculations																
2																	
3																	
4	604C10		R2		R3		R4		R1		R2		R3		R4		Cond Avg
5																	
6	Feedstream Number	F3		F3		F3		F4		F4		F4		F4		F4	
7	Feed Class	NG		NG		NG		Total		Total		Total		Total		Total	
8	Feed Class 2	MF		MF		MF		Total		Total		Total		Total		Total	
9	Feedstream Description	Natural gas		Natural gas		Natural gas		Total		Total		Total		Total		Total	
10	Feedrate	15.2		15.1		14.9											
11	Heating Value	20000		20000		20000											
12	Ash							263.50		206.50		320.50		292.00		270.6	
13	Chlorine						nd	1.9	nd	2.1	nd	2	nd	2.1		2.0	
14	Antimony						nd	2.2		6.43		10.2		3.68		5.6	
15	Arsenic						nd	0.0667	nd	0.0673		0.067	nd	0.0663		0.1	
16	Barium							1.19		0.821		0.748		0.644		0.9	
17	Beryllium						nd	0.0337		0.0709		0.0874	nd	0.0346		0.1	
18	Cadmium						nd	0.174		0.386		0.599		0.214		0.3	
19	Chromium							0.831		2.01		3.15		1.26		1.8	
20	Copper							86.6		49		37.9		41.1		53.7	
21	Lead							0.0798		0.0659		0.0853		0.0568		0.1	
22	Mercury						nd	0.118	nd	0.214	nd	0.118	nd	0.117		0.142	
23	Nickel						nd	0.688		1.47		2.45		0.845		1.4	
24	Selenium							4.75		9.53		14		5.68		8.5	
25	Silver						nd	0.557		1.6		2.72		0.966		1.5	
26	Thallium						nd	3.45		4.93		7.92		2.77		4.8	
27																	
28	Stack Gas Flowrate							4170		4170		4134		4064		4134	
29	Oxygen							3.6		3.7		3.6		3.7		3.7	
30																	
31	Thermal Feedrate	0.67		0.66		0.7		12.4		12.4		12.4		12.4		12.4	
32	Estimated Firing Rate							23.03		22.90		22.84		22.32		22.77	
33																	
34	<i>Feedrate MTEC Calculations</i>																
35	Ash							29.9		23.6		36.7		34.2	0	31.1	
36	Chlorine						100	215.9	100	240.0	100	229.2	100	246.3	100	232.9	
37	Antimony						100	250.0		735.0		1169.1		431.6	10	646.4	
38	Arsenic						100	7.6	100	7.7		7.7	100	7.8	75	7.7	
39	Barium							135.2		93.8		85.7		75.5	0	97.6	
40	Beryllium						100	3.8		8.1		10.0	100	4.1	30	6.5	
41	Cadmium						100	19.8		44.1		68.7		25.1	13	39.4	
42	Chromium							94.4		229.7		361.0		147.8	0	208.2	
43	Copper							9841.5		5600.7		4343.9		4820.3	0	6151.6	
44	Lead							9.1		7.5		9.8		6.7	0	8.3	
45	Mercury						100	13.4	100	24.5	100	13.5	100	13.7	100	16.3	
46	Nickel						100	78.2		168.0		280.8		99.1	12	156.5	
47	Selenium							539.8		1089.3		1604.6		666.2	0	975.0	
48	Silver						100	63.3		182.9		311.8		113.3	9	167.8	
49	Thallium						100	392.1		563.5		907.8		324.9	18	547.0	
50																	
51	SVM							69	28.8	0	51.7	0	78.4	0	31.8	10.4	47.7
52	LVM							11	105.8	3.1	245.5	0	378.7	7.4	159.6	3.48	222.4

	B	C	D	E
1	Process Information			
2				
3	604C10	Trial Burn		Cond Avg
4				
5	Primary Comb Chamb Temp (Red furnace)	°F		1800
6	Sec Comb Chamb Temp (Reox chamber)	°F		1634
7	Comb Cham Pressure	in H2O		-0.25
8	Quench Water Flow	gpm		16
9	VS Water Flow	gpm		84
10	Steam production	lb/hr		11440
11	Total heat input	MM Btu/hr		13.8