

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase II ID No.	730
4	EPA ID No.	OHD039128913
5	Facility Name	Dow Chemical Co. Hanging Rock Plant
6	Facility Location	
7	City	Ironton
8	State	OH
9	Unit ID Name/No.	Unit R-1
10	Other Sister Facilities	Unit R-3 identical unit
11	Number of Sister Facilities	1
12	Combustor Class	Liquid-fired boiler
13	Combustor Type	Liquid injection, process heater
14	Combustor Characteristics	Boiler -- Downtherm process heater. 9.0 MM Btu/hr, Dowtherm heater
15	Capacity (MMBtu/hr)	9
16	Soot Blowing	No
17	APCS Detailed Acronym	None
18	APCS General Class	
19	APCS Characteristics	NA
20	Hazardous Wastes	Liq
21	Haz Waste Description	Liquid waste -- ignitable (D001) and benzene (D018)
22	Supplemental Fuel	Natural gas
23		
24	Stack Characteristics	
25	Diameter (ft)	
26	Height (ft)	
27	Gas Velocity (ft/sec)	
28	Gas Temperature (°F)	
29		
30	Permitting Status	Tier I for metals and chlorine, LRWE PM waiver
31	HWC Burn Status (Date if Terminated)	

	B	C
1	Cond Description	
2		
3	730C1	
4		
5	Report Name/Date	Compliance Recertification for BIF Units R-1and R-3 Pursuant to the BIF Regulations, March 1999
6	Report Prepare	ENSR
7	Testing Firm	ENSR
8	Testing Dates	January 27, 1999
9	Cond Dates	Jan-99
10	Condition Descr	CoC; max prod rate and waste feed rate
11	Content	LRWE (PM waiver), CO in stack gas

	B	C	D	E	F	G	H	I	J	K	L	M
1	Stack Gas Emissions											
2												
3		Comme	Units	7%	O2							
4												
5												
6	730C1	ReCoc Testing				R1	R2	R3	Cond	Avg		
7												
8	CO (RA)	E1	ppmv	y		3.4	3.2	3.6		3.4		
9	CO (MHRA)	E1	ppmv	y		3.6	3.4	3.8		3.6		
10												
11	Sampling Train	CO	E1									
12	Stack Gas Flowrate		dscfm									
13	O2		%			7.8	7.4	7.4		7.5		
14	Moisture		%									
15	Temperature		°F									

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1	Feedstreams																							
2																								
3																								
4																								
5	730C1	ReCoC testing	R1		R2		R3		Cond Avg	R1		R2		R3		Cond Avg	R1		R2					
6																								
7	Feedstream Number		F1		F1		F1		F1		F2		F2		F2		F2		F3		F3		F3	
8	Feed Class		Liq HW		Liq HW		Liq HW		Liq HW		NG		NG		NG		NG		Total		Total		Total	
9	Feed Class 2		HW		HW		HW		HW		MF		MF		MF		MF		Total		Total		Total	
10	Feedstream Description		Liq. waste		Liq. waste		Liq. waste		Liq. waste		Natural gas		Natural gas		Natural gas		Natural gas		Total		Total		Total	
11	Feed Rate	lb/hr	173.2		173.2		173.1		172.8		237.5		237.7		237.5		237.6							
12	Heating Value	Btu/lb	17322		17322		17322		17322		20000		20000		20000									
13	Thermal Feedrate	MMBtu/hr	3.02		3.03E+00		4.57		3.54		4.75		4.754		4.75		4.75				7.77		7.784	
14	Density	g/cc	0.923		0.923		0.923		0.923															
15	Ash	g/hr	23.6		39.3		62.8		41.9															
16	Chlorine	g/hr	nd		39.3	nd	39.3	nd	39.3															
17	Antimony	g/hr	nd		0.059	nd	0.059	nd	0.059															
18	Arsenic	g/hr	nd		0.059	nd	0.059	nd	0.059															
19	Barium	g/hr	nd		0.012	nd	0.012	nd	0.012															
20	Beryllium	g/hr	nd		0.012	nd	0.012	nd	0.012															
21	Cadmium	g/hr	nd		0.012	nd	0.012	nd	0.012															
22	Chromium	g/hr	nd		0.059	nd	0.059	nd	0.059															
23	Lead	g/hr	nd		0.059	nd	0.059	nd	0.059															
24	Mercury	g/hr	nd		0.008	nd	0.008	nd	0.008															
25	Silver	g/hr	nd		0.059	nd	0.059	nd	0.059															
26	Thallium	g/hr	nd		0.059	nd	0.059	nd	0.059															
27																								
28	Stack Gas Flowrate	dscfm			1851.4		1800.3		2160.3		1865.6													
29	Oxygen	%			7.78		7.38		7.41		7													
30	Flowrate estimated based on firing rate																							
31																								
32																								
33	Feedrate MTEC Calculations																							
34	Ash	mg/dscm			8.0		13.2		17.6		12.9								0		8.0	0	13.2	0
35	Chlorine	ug/dscm	100		13238.9	100	13215.1	100	11037.1	100	12497.0								100		13238.9	100	6607.5	100
36	Antimony	ug/dscm	100		19.9	100	19.8	100	16.6	100	18.8								100		19.9	100	9.9	100
37	Arsenic	ug/dscm	100		19.9	100	19.8	100	16.6	100	18.8								100		19.9	100	9.9	100
38	Barium	ug/dscm	100		4.0	100	4.0	100	3.4	100	3.8								100		4.0	100	2.0	100
39	Beryllium	ug/dscm	100		4.0	100	4.0	100	3.4	100	3.8								100		4.0	100	2.0	100
40	Cadmium	ug/dscm	100		4.0	100	4.0	100	3.4	100	3.8								100		4.0	100	2.0	100
41	Chromium	ug/dscm	100		19.9	100	19.8	100	16.6	100	18.8								100		19.9	100	9.9	100
42	Lead	ug/dscm	100		19.9	100	19.8	100	16.6	100	18.8								100		19.9	100	9.9	100
43	Mercury	ug/dscm	100		2.7	100	2.7	100	2.2	100	2.5								100		2.7	100	1.3	100
44	Silver	ug/dscm	100		19.9	100	19.8	100	16.6	100	18.8								100		19.9	100	9.9	100
45	Thallium	ug/dscm	100		19.9	100	19.8	100	16.6	100	18.8								100		19.9	100	9.9	100
46																								
47	SVM	ug/dscm	100		23.9	100	23.9	100	19.9	100	22.6								100		23.9	100	23.9	100
48	LVM	ug/dscm	100		43.8	100	43.7	100	36.5	100	41.3								100		43.8	100	43.7	100
49																								
50	BIF Feedrate Limits																							
51																								
52	Antimony	g/hr							166.7															
53	Arsenic	g/hr							1.28															
54	Barium	g/hr							27792															
55	Beryllium	g/hr							2.33															
56	Cadmium	g/hr							3.1															
57	Chromium	g/hr							0.46															
58	Lead	g/hr							50															
59	Mercury	g/hr							44.3															
60	Silver	g/hr							1667															
61	Thallium	g/hr							277.9															

	B	Z	AA	AB
1	Feedstreams			
2				
3				
4				
5	730C1	R3		Cond Avg
6				
7	Feedstream Number	F3		F3
8	Feed Class	Total		Total
9	Feed Class 2	Total		Total
10	Feedstream Description		Total	Total
11	Feed Rate			
12	Heating Value			
13	Thermal Feedrate	9.32		8.29
14	Density			
15	Ash			
16	Chlorine			
17	Antimony			
18	Arsenic			
19	Barium			
20	Beryllium			
21	Cadmium			
22	Chromium			
23	Lead			
24	Mercury			
25	Silver			
26	Thallium			
27				
28	Stack Gas Flowrate			
29	Oxygen			
30	Flowrate estimated based			
31				
32				
33	<i>Feedrate MTEC Calculatio</i>			
34	Ash	17.6	0	12.9
35	Chlorine	5518.6	100	8455.0
36	Antimony	8.3	100	12.7
37	Arsenic	8.3	100	12.7
38	Barium	1.7	100	2.6
39	Beryllium	1.7	100	2.6
40	Cadmium	1.7	100	2.6
41	Chromium	8.3	100	12.7
42	Lead	8.3	100	12.7
43	Mercury	1.1	100	1.7
44	Silver	8.3	100	12.7
45	Thallium	8.3	100	12.7
46				
47	SVM	19.9	100	22.6
48	LVM	36.5	100	41.3
49				
50	BIF Feedrate Limits			
51				
52	Antimony			
53	Arsenic			
54	Barium			
55	Beryllium			
56	Cadmium			
57	Chromium			
58	Lead			
59	Mercury			
60	Silver			
61	Thallium			