

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase II ID No.	840
4	EPA ID No.	OHD004233003
5	Facility Name	Bayer (Monsanto Co. Port Plastic Plant)
6	Facility Location	
7	City	Addyston
8	State	OH
9	Unit ID Name/No.	Boiler No.4
10	Other Sister Facilities	None
11	Number of Sister Facilities	0
12	Combustor Class	Liquid-fired boiler
13	Combustor Type	Liquid-fired
14	Combustor Characteristics	Watertube boiler. Foster-Wheeler, three firing guns, 48 MMBtu/hr, 35,000 lb/hr steam
15	Capacity (MMBtu/hr)	48
16	Soot Blowing	Yes, twice per day
17	APCS Detailed Acronym	None
18	APCS General Class	
19	APCS Characteristics	NA
20	Hazardous Wastes	Liq
21	Haz Waste Description	Liquid waste byproducts (spent monomer)
22	Supplemental Fuel	Natural gas
23		
24	Stack Characteristics	
25	Diameter (ft)	4.0
26	Height (ft)	50.0
27	Gas Velocity (ft/sec)	30.8
28	Gas Temperature (°F)	508
29		
30	Permitting Status	Tier I for metals and chlorine
31	HWC Burn Status (Date if Terminated)	

	B	C
1	Cond Description	
2		
3	840C1	
4		
5	Report Name/Date	Periodic Recertification of Compliance Boiler No. 4 Monsanto Company Port Plastics Plant, December 1994
6	Report Prepare	B3 Systems, Inc.
7	Testing Firm	METCO Environmental
8	Testing Dates	September 28, 1994
9	Cond Dates	Sep-94
10	Condition Descr	CoC; max feed Bldg. 30 spent monomer and resimene distillate
11	Content	PM, CO
12		
13	840C2	
14		
15	Report Name/Date	Periodic Recertification of Compliance Boiler No. 4 Monsanto Company Port Plastics Plant, December 1994
16	Report Prepare	B3 Systems, Inc.
17	Testing Firm	METCO Environmental
18	Testing Dates	September 29, 1994
19	Cond Dates	Sep-94
20	Condition Descr	CoC; max feed Bldg. 9 spent monomer and resimene distillate
21	Content	PM, CO
22		
23	840C3	
24		
25	Report Name/Date	Compliance Recertification for Bayer's Boiler No. 4 Pursuant to the BIF Regulations; November 1997 Doc No 4690-047-400
26	Report Prepare	Bayer Corporation-Polymers Division-Addyson Facility
27	Testing Firm	ENSR
28	Testing Dates	October 1, 1997
29	Cond Dates	Oct-97
30	Condition Descr	CoC; max feed Bldg. 30 spent monomer and resimene distillate
31	Content	Stack PM, HCl and Cl2; Feed analysis
32		
33	840C4	
34		
35	Report Name/Date	Compliance Recertification for Bayer's Boiler No. 4 Pursuant to the BIF Regulations; November 1997 Doc No 4690-047-400
36	Report Prepare	Bayer Corporation-Polymers Division-Addyson Facility
37	Testing Firm	ENSR
38	Testing Dates	October 2, 1997
39	Cond Dates	Oct-97
40	Condition Descr	CoC; max feed Bldg. 9 spent monomer and resimene distillate
41	Content	Stack PM, HCl and Cl2; Feed analysis

	B	C	D	E	F	G	H	I	J	K	L	M
1	Stack Gas Emissions											
2												
3		Comments	Units	7% O2								
4												
5												
6	840C1					R1		R2		R3		Cond Avg
7												
8	PM	E1	gr/dscf	y		0.0275		0.031		0.0208		0.0264
9	CO (RA)	E1	ppmv	y		7.26		1.94		0.89		3.4
10	CO (MHRA)	E1	ppmv	y		9.05		8.81		0.99		6.3
11												
12	Sampling Train	PM	E1									
13	Stack Gas Flowrate		dscfm			10263		9953		10678		10298.0
14	O2		%			7.8		7.4		6.4		7.2
15	Moisture		%			22.1		18.86		18.14		19.7
16	Temperature		°F			490		500		493		494.3
17												
18												
19	840C2					R1		R2		R3		Cond Avg
20												
21	PM	E1	gr/dscf	y		0.0218		0.0191		0.0256		0.0222
22	CO (RA)	E1	ppmv	y		1.19		1.56		3.9		2.2
23	CO (MHRA)	E1	ppmv	y		1.27		1.61		5.9		2.9
24												
25	Sampling Train	PM	E1									
26	Stack Gas Flowrate		dscfm			10638		11286		10234		10719.3
27	O2		%			7.7		7.7		7.7		7.7
28	Moisture		%			17.89		17.99		18.06		18.0
29	Temperature		°F			505		517		511		511.0
30												
31												
32	840C3					R1		R2		R3		Cond Avg
33												
34	PM	E1	gr/dscf	y								0.0463
35	CO (RA)	E1	ppmv	y		3.63		5.06		4.32		4.3
36	CO (MHRA)	E1	ppmv	y		2.95		8.69		4.31		5.3
37												
38	Sampling Train	PM	E1									
39	Stack Gas Flowrate		dscfm			10914		10920		10946		10926.7
40	O2		%			8.97		7.73		7.47		8.1
41	Moisture		%			15.7		15.5		15.9		15.7
42	Temperature		°F			511		522.6		517.5		517.0
43												
44	840C4					R1		R2		R3		Cond Avg
45												
46	PM	E1	gr/dscf	y		0.0352		0.0353		0.0487		0.0397
47	CO (RA)	E1	ppmv	y		2.06		6.62		7.94		5.5
48	CO (MHRA)	E1	ppmv	y		2.52		5.53		7.68		5.2
49	HCl		ppmv	n		0.37		0.31		0.38		0.35
50	Total Chlorine		ppmv	n		0.0064		0.006		0.00555		0.0
51												
52	Sampling Train	PM/HCl/Cl2	E1									
53	Stack Gas Flowrate		dscfm			10374		10138		9880		10130.7
54	O2		%			7.17		7.27		7.4		7.3
55	Moisture		%			15.3		15.7		15.4		15.5
56	Temperature		°F			505		508		509		507.3
57												
58	HCl	E1	ppmv	y		0.4		0.3		0.4		0.4
59	Cl2	E1	ppmv	y		0.0		0.0		0.0		0.0
60	Total Chlorine	E1	ppmv	y		0.4		0.3		0.4		0.4

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	Feedstreams																					
2																						
3																						
4	840C1																					
5	Feedstream Number																					
6	Feed Class																					
7	Feed Class 2																					
8	Feedstream Description																					
9	Feed Rate	g/hr																				
10	Thermal Feedrate	MMBtu/hr																				
11	Heating Value	Btu/lb																				
12	Viscosity	cp																				
13	Density	g/ml																				
14	Ash	g/hr	nd																			
15	Chlorine	g/hr	54.41	nd																		
16	Antimony	g/hr	54.41	nd																		
17	Antimony	g/hr	5.44	nd																		
18	Arsenic	g/hr	0.054	nd																		
19	Barium	g/hr	0.218	nd																		
20	Beryllium	g/hr	0.005	nd																		
21	Cadmium	g/hr	0.002	nd																		
22	Chromium	g/hr	0.022	nd																		
23	Lead	g/hr	2.72	nd																		
24	Mercury	g/hr	0.044	nd																		
25	Silver	g/hr	2.72	nd																		
26	Thallium	g/hr	43.52	nd																		
27	Stack Gas Flowrate	dscfm	10263																			
28	Oxygen	%	7.8																			
29																						
30																						
31	Estimated Firing Rate	MMBtu/hr																				
32																						
33	Feedrate MTEC Calculations																					
34	Ash	mg/dscm	100																			
35	Chlorine	ug/dscm	3311.5	100																		
36	Antimony	ug/dscm	331.1	100																		
37	Arsenic	ug/dscm	3.3	100																		
38	Barium	ug/dscm	13.3	100																		
39	Beryllium	ug/dscm	0.3	100																		
40	Cadmium	ug/dscm	0.1	100																		
41	Chromium	ug/dscm	1.3	100																		
42	Lead	ug/dscm	165.5	100																		
43	Mercury	ug/dscm	2.7	100																		
44	Silver	ug/dscm	165.5	100																		
45	Thallium	ug/dscm	2648.7	100																		
46																						
47	SVM	ug/dscm	165.7	100																		
48	LVM	ug/dscm	4.9	100																		
49																						
50																						
51																						
52																						
53	840C2																					
54	Feedstream Number																					
55	Feed Class																					
56	Feed Class 2																					
57	Feedstream Description																					
58	Feed Rate	g/hr																				
59	Thermal Feedrate	MMBtu/hr																				
60																						

	B	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR
1	Feedstreams																					
2																						
3																						
4	840C1	R2	R3	F3	F3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg
5	Feedstream Number	F3	Liq non-HW	Liq non-HW	Liq non-HW	F3	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4
6	Feed Class	Liq non-HW	Non-HW	Non-HW	Non-HW	Liq non-HW	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7	Feed Class 2	Non-HW	Non-HW	Non-HW	Non-HW	Non-HW	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF
8	Feedstream Description	Resim. Dist.	Resim. Dist.	Resim. Dist.	Resim. Dist.	Resim. Dist.	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas
9	Feed Rate	1484236	1484236	1484236	1484236	1484236	446581	446581	446581	446581	446581	446581	446581	446581	446581	446581	446581	446581	446581	446581	446581	446581
10	Thermal Feedrate	1.6	1.6	1.6	1.6	1.6	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4
11	Heating Value	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0
12	Viscosity						6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
13	Density						1.039	1.039	1.039	1.039	1.039	1.039	1.039	1.039	1.039	1.039	1.039	1.039	1.039	1.039	1.039	1.039
14	Ash	140.816	nd	139.7	nd	139.7	nd	139.7	nd	139.7	nd	139.7	nd	139.7	nd	139.7	nd	139.7	nd	139.7	nd	139.7
15	Chlorine	140.816	nd	139.7	nd	139.7	nd	139.7	nd	139.7	nd	139.7	nd	139.7	nd	139.7	nd	139.7	nd	139.7	nd	139.7
16	Antimony	140.816	nd	139.7	nd	139.7	nd	139.7	nd	139.7	nd	139.7	nd	139.7	nd	139.7	nd	139.7	nd	139.7	nd	139.7
17	Arsenic	0.141	nd	0.14	nd	0.14	nd	0.14	nd	0.14	nd	0.14	nd	0.14	nd	0.14	nd	0.14	nd	0.14	nd	0.14
18	Barium	0.563	nd	0.559	nd	0.559	nd	0.559	nd	0.559	nd	0.559	nd	0.559	nd	0.559	nd	0.559	nd	0.559	nd	0.559
19	Beryllium	0.014	nd	0.014	nd	0.014	nd	0.014	nd	0.014	nd	0.014	nd	0.014	nd	0.014	nd	0.014	nd	0.014	nd	0.014
20	Cadmium	0.056	nd	0.056	nd	0.056	nd	0.056	nd	0.056	nd	0.056	nd	0.056	nd	0.056	nd	0.056	nd	0.056	nd	0.056
21	Chromium	0.073	nd	0.073	nd	0.073	nd	0.073	nd	0.073	nd	0.073	nd	0.073	nd	0.073	nd	0.073	nd	0.073	nd	0.073
22	Lead	7.041	nd	6.985	nd	6.985	nd	6.985	nd	6.985	nd	6.985	nd	6.985	nd	6.985	nd	6.985	nd	6.985	nd	6.985
23	Mercury	0.113	nd	0.112	nd	0.112	nd	0.112	nd	0.112	nd	0.112	nd	0.112	nd	0.112	nd	0.112	nd	0.112	nd	0.112
24	Silver	7.041	nd	6.985	nd	6.985	nd	6.985	nd	6.985	nd	6.985	nd	6.985	nd	6.985	nd	6.985	nd	6.985	nd	6.985
25	Thallium	112.652	nd	111.76	nd	111.76	nd	111.76	nd	111.76	nd	111.76	nd	111.76	nd	111.76	nd	111.76	nd	111.76	nd	111.76
26	Stack Gas Flowrate	9953		10678		10678		10678		10678		10678		10678		10678		10678		10678		10678
27	Oxygen	7.4		6.4		6.4		6.4		6.4		6.4		6.4		6.4		6.4		6.4		6.4
28	Estimated Firing Rate																					
29																						
30																						
31																						
32																						
33	Feedrate MTEC Calculations																					
34	Ash	8.6	100	7.4	100	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
35	Chlorine	8577.3	100	7388.3	100	8213	100	8213	100	8213	100	8213	100	8213	100	8213	100	8213	100	8213	100	8213
36	Antimony	8577.3	100	7388.8	100	3394	100	3394	100	3394	100	3394	100	3394	100	3394	100	3394	100	3394	100	3394
37	Arsenic	8.6	100	7.4	100	8	100	8	100	8	100	8	100	8	100	8	100	8	100	8	100	8
38	Barium	34.3	100	29.6	100	33	100	33	100	33	100	33	100	33	100	33	100	33	100	33	100	33
39	Beryllium	0.9	100	0.7	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	1	100	1
40	Cadmium	3.4	100	0.3	100	4	100	4	100	4	100	4	100	4	100	4	100	4	100	4	100	4
41	Chromium	4.4	100	3.694	100	411	100	411	100	411	100	411	100	411	100	411	100	411	100	411	100	411
42	Lead	428.9	100	369.4	100	411	100	411	100	411	100	411	100	411	100	411	100	411	100	411	100	411
43	Mercury	6.9	100	5.9	100	7	100	7	100	7	100	7	100	7	100	7	100	7	100	7	100	7
44	Silver	428.9	100	369.4	100	411	100	411	100	411	100	411	100	411	100	411	100	411	100	411	100	411
45	Thallium	6861.8	100	5910.6	100	6570	100	6570	100	6570	100	6570	100	6570	100	6570	100	6570	100	6570	100	6570
46	SVM	216.1	100	184.9	100	206	100	206	100	206	100	206	100	206	100	206	100	206	100	206	100	206
47	LVM	6.9	100	6.3	100	7	100	7	100	7	100	7	100	7	100	7	100	7	100	7	100	7
48																						
49																						
50																						
51																						
52																						
53	840C2	R2	R3	F3	F3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg
54	Feedstream Number	F3	Liq non-HW	Liq non-HW	Liq non-HW	F3	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4
55	Feed Class	Liq non-HW	Non-HW	Non-HW	Non-HW	Liq non-HW	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
56	Feed Class 2	Non-HW	Non-HW	Non-HW	Non-HW	Non-HW	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF
57	Feedstream Description	Resim. Dist.	Resim. Dist.	Resim. Dist.	Resim. Dist.	Resim. Dist.	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas	Nat Gas
58	Feed Rate	1395426	1395426	1395426	1395426	1395426	446369	446369	446369	446369	446369	446369	446369	446369	446369	446369	446369	446369	446369	446369	446369	446369
59	Thermal Feedrate	1.5	1.5	1.5	1.5	1.5	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9
60																						

B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	
61	Heating Value	Btu/lb		17367		17367			17367												500	
62	Viscosity	cp								17367												
63	Density	g/ml								6.0												
64	Ash	g/hr	nd	56.34	nd	55.52	nd	55.74	55.74	0.888											139.67	
65	Chlorine	g/hr	nd	57.46	nd	55.52	nd	55.74	55.74												139.67	
66	Antimony	g/hr	nd	5.63	nd	5.552	nd	5.574	5.574												13.967	
67	Arsenic	g/hr	nd	0.056	nd	0.056	nd	0.139	0.139												0.14	
68	Barium	g/hr	nd	0.225	nd	0.222	nd	0.223	0.223												0.559	
69	Beryllium	g/hr	nd	0.006	nd	0.006	nd	0.006	0.006												0.014	
70	Cadmium	g/hr	nd	0.002	nd	0.002	nd	0.004	0.004												0.006	
71	Chromium	g/hr	nd	0.023	nd	0.022	nd	0.022	0.022												0.074	
72	Lead	g/hr	nd	2.817	nd	2.776	nd	2.787	2.787												6.984	
73	Mercury	g/hr	nd	0.045	nd	0.044	nd	0.045	0.045												0.112	
74	Silver	g/hr	nd	2.817	nd	2.776	nd	2.787	2.787												6.984	
75	Thallium	g/hr	nd	45.07	nd	44.42	nd	44.591	44.591												111.738	
76																						
77	Stack Gas Flowrate	dscfm		10638		11286		10234	10234												10638	
78	Oxygen	%		7.7		7.7		7.7	7.7												7.7	
79																						
80	Estimated Firing Rate	MMBtu/hr																				
81																						
82	Feedrate MTEC Calculations																					
83	Ash	mg/dscm	100	3.3	100	3.0	100	3.4	100	3.2											8.1	
84	Chlorine	ug/dscm	100	3348.5	100	3049.6	100	3376.4	66	3258.2											8139.2	
85	Antimony	ug/dscm	100	328.1	100	305.0	100	337.6	100	323.6											813.9	
86	Arsenic	ug/dscm	100	3.3	100	3.1	100	8.4	100	4.9											8.2	
87	Barium	ug/dscm	100	13.1	100	12.2	100	13.5	100	12.9											32.6	
88	Beryllium	ug/dscm	100	0.3	100	0.3	100	0.4	100	0.3											0.8	
89	Cadmium	ug/dscm	100	0.12	100	0.11	100	0.24	100	0.2											0.35	
90	Chromium	ug/dscm	100	1.3	100	1.2	100	1.3	100	1.3											4.3	
91	Lead	ug/dscm	100	164.2	100	152.5	100	168.8	100	162											407.0	
92	Mercury	ug/dscm	100	2.6	100	2.4	100	2.7	100	2.6											6.5	
93	Silver	ug/dscm	100	164.2	100	152.5	100	168.8	100	162											407.0	
94	Thallium	ug/dscm	100	2626.4	100	2439.9	100	2701.1	100	2589											6511.5	
95																						
96	SVM	ug/dscm	100	164.3	100	152.6	100	169.1	100	162											407.3	
97	LVM	ug/dscm	100	5.0	100	4.6	100	10.1	100	7											13.3	
98																						
99																						
100																						
101																						
102	840C3																					
103																						
104	Feedstream Number																					
105	Feed Class																					
106	Feed Class 2																					
107	Feedstream Description																					
108	Feed Rate	lb/hr		1202		1238		1226		1238												
109	Heating Value	Btu/lb		18667		18667		18667		18667												
110	Viscosity	cp																				
111	Density	g/ml																				
112	Ash	%wt	nd	0.003		0.006	nd	0.003		0.004											100	
113	Chlorine	mg/kg		196	nd	200	nd	200	nd	200												
114	Antimony	mg/kg	nd	10	nd	10	nd	10	nd	10												
115	Arsenic	mg/kg	nd	0.032	nd	0.017	nd	0.017	nd	0.017												
116	Barium	mg/kg	nd	0.39	nd	0.4	nd	0.39	nd	0.4												
117	Beryllium	mg/kg	nd	0.003	nd	0.003	nd	0.003	nd	0.003												
118	Cadmium	mg/kg	nd	0.003	nd	0.003	nd	0.003	nd	0.003												
119	Chromium	mg/kg	nd	0.052	nd	0.084	nd	0.033	nd	0.083												
120	Lead	mg/kg	nd	4.9	nd	5	nd	4.9	nd	5												

	B	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	
61	Heating Value		500		500																		
62	Viscosity								500														
63	Density								6.00														
64	Ash		139.428	139.428	nd	139.541			1.035														
65	Chlorine		139.428	139.428	nd	139.541																	
66	Antimony		13.943	13.943	nd	13.954																	
67	Arsenic		0.139	0.139	nd	0.14																	
68	Barium		0.558	0.558	nd	0.559																	
69	Beryllium		0.014	0.014	nd	0.014																	
70	Cadmium		0.006	0.006	nd	0.006																	
71	Chromium		0.081	0.084	nd	0.079																	
72	Lead		6.971	6.971	nd	6.979																	
73	Mercury		0.112	0.112	nd	0.112																	
74	Silver		6.971	6.971	nd	6.976																	
75	Thallium		111.542	111.542	nd	111.656																	
76																							
77	Stack Gas Flowrate		11286	10234																		10719.33	
78	Oxygen		7.7	7.7																		7.7	
79																							
80	Estimated Firing Rate																						
81																							45.3
82	Feedrate MTEC Calculations																						
83	Ash		7.7	8.4	100	8.1																	
84	Chlorine		7658.6	8445.8	100	8081.2																	
85	Antimony		765.9	844.6	100	808.1																	
86	Arsenic		7.6	8.4	100	8.1																	
87	Barium		30.7	33.8	100	32.3																	
88	Beryllium		0.8	0.8	100	0.8																	
89	Cadmium		0.33	0.36	100	0.3																	
90	Chromium		4.4	5.1	100	4.6																	
91	Lead		382.9	422.3	100	404.1																	
92	Mercury		6.2	6.8	100	6.5																	
93	Silver		382.9	422.3	100	404.1																	
94	Thallium		6126.8	6756.7	100	6465.0																	
95																							
96	SVM		383.2	422.6	100	404.4																	
97	LVM		12.9	14.4	100	13.5																	
98																							
99																							
100																							
101																							
102	840C3																						
103																							
104	Feedstream Number																						
105	Feed Class		F3	F3		F3																	F4
106	Feed Class 2		Spike	Spike		Spike																	Total
107	Feedstream Description		Spike	Spike		Spike																	Total
108	Feed Rate		Ash Spike	Ash Spike		Ash Spike																	Total
109	Heating Value		4.94	4.89		4.89																	Total
110	Viscosity																						
111	Density																						
112	Ash		100	100		2233																	
113	Chlorine																						
114	Antimony																						
115	Arsenic																						
116	Barium																						
117	Beryllium																						
118	Cadmium																						
119	Chromium																						
120	Lead																						

B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
121	Mercury	mg/kg	nd	0.08	nd	0.08	nd	0.08	nd	0.08	nd	0.08	nd	0.08	nd	0.08	nd				
122	Silver	mg/kg	nd	1	nd	1	nd	1	nd	1	nd	1	nd	1	nd	1	nd				
123	Thallium	mg/kg	nd	20	nd	20	nd	20	nd	20	nd	20	nd	20	nd	20	nd				
124																					
125	Stack Gas Flowrate	dscfm		10914		10920		10946		10914		10914		10920		10946					10914
126	Oxygen	%		8.97		7.73		7.47		8.97		8.97		7.73		7.47					8.97
127																					
128	Thermal Feedrate	MMBtu/hr		22.4		23.1		22.9		22.8		0.7		0.6		0.6					0.6
129	Estimated Firing Rate	MMBtu/hr																			
130																					
131	Feedrate MTEC Calculations																				
132	Ash	mg/dscm	100	1.03		1.92	100	0.93	51	1.3	100	2.25	100	2.00		6.50	40				140.41
133	Chlorine	ug/dscm		6717	100	6396	100	6197	65	6436.7	100	15025	100	13303	100	13007	100				13778.2
134	Antimony	ug/dscm	100	343	100	320	100	310	100	324.1	100	751	100	665	100	650	100				688.9
135	Arsenic	ug/dscm		1.1	100	0.5	100	0.5	49	0.7	100	1.3	100	1.1	100	1.1	100				1.2
136	Barium	ug/dscm	100	13	100	13	100	12	100	12.7	100	30	100	25	100	26	100				27.1
137	Beryllium	ug/dscm	100	0.1	100	0.1	100	0.1	100	0.1	100	0.2	100	0.2	100	0.2	100				0.2
138	Cadmium	ug/dscm	100	0.1	100	0.1	100	0.1	100	0.1	100	0.2	100	0.2	100	0.2	100				0.2
139	Chromium	ug/dscm		1.8		2.7	100	1.0	19	1.8		6.2		4.2		5.5	0				5.3
140	Lead	ug/dscm	100	168	100	160	100	152	100	159.9	100	376	100	319	100	325	100				340.0
141	Mercury	ug/dscm	100	2.7	100	2.6	100	2.5	100	2.6	100	6.0	100	5.3	100	5.2	100				5.5
142	Silver	ug/dscm	100	34	100	32	100	31	100	32.4	100	75	100	67	100	65	100				68.9
143	Thallium	ug/dscm	100	685	100	640	100	620	100	648.2	100	1502	100	1264	100	1301	100				1355.6
144																					
145	SVM	ug/dscm	100	168.0	100	160.0	100	151.9	100	160.0	100	375.8	100	319.5	100	325.4	100				340.2
146	LVM	ug/dscm	3	2.98	19	3.33	100	1.64	30	2.6	19	7.74	24	5.52	19	6.76	21				6.7
147																					
148																					
149																					
150	840C4																				
151																					
152	Feedstream Number																				
153	Feed Class																				
154	Feed Class 2																				
155	Feedstream Description																				
156	Feed Rate	lb/hr		1232		1229		1228		5579	19	2626		2596		2605					5.0
157	Heating Value	Btu/lb		16300		16300		16300		16300		250		250		250					5.0
158	Viscosity	cp																			
159	Density	g/ml																			
160	Ash	wt%		0.003		0.005	nd	0.003		0.909											100
161	Chlorine	mg/kg		226	nd	200	nd	200													
162	Antimony	mg/kg	nd	10	nd	10	nd	10													
163	Arsenic	mg/kg	nd	0.017	nd	0.017	nd	0.017													
164	Barium	mg/kg	nd	0.39	nd	0.38	nd	0.39													
165	Beryllium	mg/kg	nd	0.003	nd	0.003	nd	0.003													
166	Cadmium	mg/kg	nd	0.003	nd	0.003	nd	0.003													
167	Chromium	mg/kg	nd	0.033	nd	0.033	nd	0.033													
168	Lead	mg/kg	nd	4.9	nd	4.8	nd	4.9													
169	Mercury	mg/kg	nd	0.08	nd	0.08	nd	0.08													
170	Silver	mg/kg	nd	1.0	nd	1.0	nd	1.0													
171	Thallium	mg/kg	nd	20	nd	19	nd	19													
172																					
173	Stack Gas Flowrate	dscfm		10374		10138		9880		10374		10374		10138		9880					10374
174	Oxygen	%		7.17		7.27		7.4		7.17		7.17		7.27		7.4					7.17
175																					
176	Thermal Feedrate	MMBtu/hr		20.1		20.0		20.0		20.0		0.7		0.6		0.7					0.7
177	Estimated Firing Rate	MMBtu/hr																			
178																					
179	Feedrate MTEC Calculations																				
180	Ash	mg/dscm		1.0		1.7	100	1.0	28	1.2		2.1		2.1		2.2	34				129.3

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
181	Chlorine				7264.4	100	6610.1	100	6841.9	65	6905.4	100	13702.6	100	13962.3	100	14514.0	100	14059.7			
182	Antimony	ug/dscm		100	321.4	100	330.5	100	342.1	100	331.3	100	685.1	100	698.1	100	725.7	100	703.0			
183	Arsenic	ug/dscm		100	0.5	100	0.6	100	0.6	100	0.6	100	1.2	100	1.2	100	1.2	100	1.2			
184	Barium	ug/dscm		100	12.5	100	12.6	100	13.3	100	12.8	100	27.4	100	27.2	100	29.0	100	27.9			
185	Beryllium	ug/dscm		100	0.1	100	0.1	100	0.1	100	0.1	100	0.2	100	0.2	100	0.2	100	0.2			
186	Cadmium	ug/dscm		100	0.1	100	0.1	100	0.1	100	0.1	100	0.2	100	0.2	100	0.2	100	0.2			
187	Chromium	ug/dscm		100	1.1	100	1.1	100	1.1	100	1.1	100	2.8	100	4.5	100	3.0	0	3.4			
188	Lead	ug/dscm		100	157.5	100	158.6	100	167.6	100	161.3	100	342.6	100	342.1	100	362.9	100	349.2			
189	Mercury	ug/dscm		100	2.6	100	2.6	100	2.7	100	2.7	100	5.5	100	5.6	100	5.8	100	5.6			
190	Silver	ug/dscm		100	32.1	100	33.1	100	34.2	100	33.1	100	68.5	100	69.8	100	72.6	100	70.3			
191	Thallium	ug/dscm		100	642.9	100	628.0	100	650.0	100	640.3	100	1370.3	100	1396.2	100	1451.4	100	1406.0			
192																						
193	SVM	ug/dscm		100	157.6	100	158.7	100	167.7	100	161.4	100	342.8	100	342.3	100	363.1	100	349.4			
194	LVM	ug/dscm		100	1.7	100	1.8	100	1.8	100	1.8	33	4.2	24	5.9	33	4.4	29	4.8			
195																						
196																						
197	BIF Feedrate Limits																					
198																						
199	Antimony	g/hr																				
200	Arsenic	g/hr																				
201	Barium	g/hr																				
202	Beryllium	g/hr																				
203	Cadmium	g/hr																				
204	Chromium	g/hr																				
205	Lead	g/hr																				
206	Mercury	g/hr																				
207	Silver	g/hr																				
208	Thallium	g/hr																				
209	Chlorine	g/hr																				

	B	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR
181	Chlorine														65	20966.9	100	20572.4	100	21356.0	88	20965.1
182	Antimony														100	1006.6	100	1028.6	100	1067.8	100	1034.3
183	Arsenic														100	1.7	100	1.7	100	1.8	100	1.8
184	Barium														100	39.9	100	39.8	100	42.4	100	40.7
185	Beryllium														100	0.3	100	0.3	100	0.3	100	0.3
186	Cadmium														100	0.3	100	0.3	100	0.3	100	0.3
187	Chromium														27	3.9	20	5.6	28	4.1	24	4.5
188	Lead														100	500.1	100	500.7	100	530.5	100	510.4
189	Mercury														100	8.1	100	8.2	100	8.5	100	8.3
190	Silver														100	100.7	100	102.9	100	106.8	100	103.4
191	Thallium														100	2013.1	100	2024.2	100	2101.4	100	2046.2
192																						
193	SVM														100	500.4	100	501.0	100	530.8	100	510.7
194	LVM														52	5.9	41	7.6	52	6.2	48	6.6
195																						
196																						
197	BIF Feedrate Limits																					
198																						
199	Antimony																					
200	Arsenic																					
201	Barium																					
202	Beryllium																					
203	Cadmium																					
204	Chromium																					
205	Lead																					
206	Mercury																					
207	Silver																					
208	Thallium																					
209	Chlorine																					

	A	B	C
1	Process Information		
2			
3	840C1		Cond Avg
4			
5	Steam Prod Rate	lb/hr	29500
6			
7	840C2		Cond Avg
8			
9	Steam Prod Rate	lb/hr	30000
10			
11	840C3		Cond Avg
12			
13	Steam Prod Rate	lb/hr	29734
14	Combustion Zone Temp	°F	1438
15			
16	840C4		Cond Avg
17			
18	Steam Prod Rate	lb/hr	30467
19	Combustion Zone Temp	°F	1465