	A	B
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	Combustor	Liquid-fired boiler
12	Combustor Characteristics	Watertube boiler. Foster-Wheeler, three firing guns, 48 MMBtu/hr, 35,000 lb/hr steam
13	Capacity (MMBtu/hr)	48
14	Soot Blowing	Yes, twice per day
15	APCS	None
16	APCS Characteristics	NA
17	Hazardous Wastes	Liq
18	Haz Waste Description	Liquid waste byproducts (spent monomer)
19	Supplemental Fuel	Natural gas
20		
21	Stack Characteristics	
22	Diameter (ft)	4.0
23	Height (ft)	50.0
24	Gas Velocity (ft/sec)	30.8
25	Gas Temperature (°F)	508
26		
27	Permitting Status	Tier I for metals and chlorine
28	HWC Burn Status (Date if Terminated)	

	A	B
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		1		3		4		Cond Avg
4								Sootblow				
5	**Condition 1**											
6												
7	PM		gr/dscf	y		0.0275		0.031		0.0208		0.0264
8	CO (RA)		ppmv	y		7.26		1.94		0.89		3.4
9	CO (MHRA)		ppmv	y		9.05		8.81		0.99		6.3
10												
11	Sampling Train	PM										
12	Stack Gas Flowrate		dscfm			10263		9953		10678		10298.0
13	O2		%			7.8		7.4		6.4		7.2
14	Moisture		%			22.1		18.86		18.14		19.7
15	Temperature		°F			490		500		493		494.3
16												
17	**Condition 2**					1		2		3		
18												
19	PM		gr/dscf	y		0.0218		0.0191		0.0256		0.0222
20	CO (RA)		ppmv	y		1.19		1.56		3.9		2.2
21	CO (MHRA)		ppmv	y		1.27		1.61		5.9		2.9
22												
23	Sampling Train	PM										
24	Stack Gas Flowrate		dscfm			10638		11286		10234		10719.3
25	O2		%			7.7		7.7		7.7		7.7
26	Moisture		%			17.89		17.99		18.06		18.0
27	Temperature		°F			505		517		511		511.0
28												
29	**Condition 3**											
30												
31	PM		gr/dscf	y								0.0463
32	CO (RA)		ppmv	y		3.63		5.06		4.32		4.3
33	CO (MHRA)		ppmv	y		2.95		8.69		4.31		5.3
34												
35	Sampling Train	PM										
36	Stack Gas Flowrate		dscfm			10914		10920		10946		10926.7
37	O2		%			8.97		7.73		7.47		8.1
38	Moisture		%			15.7		15.5		15.9		15.7
39	Temperature		°F			511		522.6		517.5		517.0
40												
41	**Condition 4**					1		2		3		
42												
43	PM		gr/dscf	y		0.0352		0.0353		0.0487		0.0397
44	CO (RA)		ppmv	y		2.06		6.62		7.94		5.5
45	CO (MHRA)		ppmv	y		2.52		5.53		7.68		5.2
46	HCl		ppmv	n		0.37		0.31		0.38		0.35
47	Total Chlorine		ppmv	n		0.0064		0.006		0.00555		0.0
48												
49	Sampling Train	PM										
50	Stack Gas Flowrate		dscfm			10374		10138		9880		10130.7
51	O2		%			7.17		7.27		7.4		7.3
52	Moisture		%			15.3		15.7		15.4		15.5
53	Temperature		°F			505		508		509		507.3
54												
55	HCl		ppmv	y		0.4		0.3		0.4		0.4
56	Cl2		ppmv	y		0.0		0.0		0.0		0.0
57	Total Chlorine		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**				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1	
5					Haz Waste		Haz Waste		Haz Waste		Haz Waste										Non Haz Waste	No
6	Feedstream Description				Bldg 30 Monomer		Bldg 30 Monomer		Bldg 30 Monomer		Bldg 30 Monomer		Spike CuSO4		Spike CuSO4		Spike CuSO4		Spike CuSO4		Resim. Dist.	
7	Feed Rate		g/hr								548267								11212			
8	Thermal Feedrate		MMBtu/hr								20.9											
9	Heating Value		Btu/lb								17267.0											
10	Viscosity		cp								6.0											
11	Density		g/ml								0.899											
12	Ash		g/hr	nd	54.41	nd	54.43	nd	55.66				2052		1537		2052		1865	nd	142.5	nd
13	Chlorine		g/hr	nd	54.41	nd	54.43	nd	55.66											nd	142.5	nd
14	Antimony		g/hr	nd	5.44	nd	5.44	nd	5.566											nd	14.25	nd
15	Arsenic		g/hr	nd	0.054	nd	0.054	nd	0.056											nd	0.143	nd
16	Barium		g/hr	nd	0.218	nd	0.218	nd	0.223											nd	0.571	nd
17	Beryllium		g/hr	nd	0.005	nd	0.005	nd	0.006											nd	0.014	nd
18	Cadmium		g/hr	nd	0.002	nd	0.002	nd	0.002											nd	0.006	nd
19	Chromium		g/hr	nd	0.022	nd	0.022	nd	0.022											nd	0.057	nd
20	Lead		g/hr	nd	2.72	nd	2.722	nd	2.783											nd	7.125	nd
21	Mercury		g/hr	nd	0.044	nd	0.044	nd	0.045											nd	0.114	nd
22	Silver		g/hr	nd	2.72	nd	2.722	nd	2.783											nd	7.125	nd
23	Thallium		g/hr	nd	43.52	nd	43.55	nd	44.53											nd	114.002	nd
24																						
25	Stack Gas Flowrate		dscfm		10263		9953		10678				10263		9953		10678				10263	
26	Oxygen		%		7.8		7.4		6.4				7.8		7.4		6.4				7.8	
27																						
28	Thermal Feedrate		MMBtu/hr								20.9											
29	Estimated Firing Rate		MMBtu/hr																			
30																						
31	*Feedrate MTEC Calculations*																					
32	Ash		mg/dscm	nd	3.3	nd	3.3	nd	2.9		3		124.9		93.6		108.5		109	nd	8.7	nd
33	Chlorine		ug/dscm	nd	3311.5	nd	3315.4	nd	2943.7		1595									nd	8672.8	nd
34	Antimony		ug/dscm	nd	331.1	nd	331.4	nd	294.4											nd	867.3	nd
35	Arsenic		ug/dscm	nd	3.3	nd	3.3	nd	3.0											nd	8.7	nd
36	Barium		ug/dscm	nd	13.3	nd	13.3	nd	11.8											nd	34.8	nd
37	Beryllium		ug/dscm	nd	0.3	nd	0.3	nd	0.3											nd	0.9	nd
38	Cadmium		ug/dscm	nd	0.1	nd	0.1	nd	0.1											nd	0.4	nd
39	Chromium		ug/dscm	nd	1.3	nd	1.3	nd	1.2											nd	3.5	nd
40	Lead		ug/dscm	nd	165.5	nd	165.8	nd	147.2											nd	433.6	nd
41	Mercury		ug/dscm	nd	2.7	nd	2.7	nd	2.4											nd	6.9	nd
42	Silver		ug/dscm	nd	165.5	nd	165.8	nd	147.2											nd	433.6	nd
43	Thallium		ug/dscm	nd	2648.7	nd	2652.7	nd	2355.1											nd	6938.3	nd
44																						
45	SVM		ug/dscm		82.8		83.0		73.6		80										217.0	
46	LVM		ug/dscm		2.5		2.5		2.2		2										6.5	
47																						
48	**840C2**				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1	
49					Haz Waste		Haz Waste		Haz Waste		Haz Waste										Non Haz Waste	No
50	Feedstream Description				Bldg 30 Monomer		Bldg 30 Monomer		Bldg 30 Monomer		Bldg 30 Monomer		Spike CuSO4		Spike CuSO4		Spike CuSO4		Spike CuSO4		Resim. Dist.	
51	Feed Rate		g/hr								564213								11399			
52	Thermal Feedrate		MMBtu/hr								21.5											
53	Heating Value		Btu/lb								17367											
54	Viscosity		cp								6.0											
55	Density		g/ml								0.888											
56	Ash		g/hr	nd	56.34	nd	55.52	nd	55.74				2052		2052		2052		2052	nd	139.67	nd
57	Chlorine		g/hr		57.46	nd	55.52	nd	55.74											nd	139.67	nd
58	Antimony		g/hr	nd	5.63	nd	5.552	nd	5.574											nd	13.967	nd
59	Arsenic		g/hr	nd	0.056	nd	0.056	nd	0.139											nd	0.14	nd
60	Barium		g/hr	nd	0.225	nd	0.222	nd	0.223											nd	0.559	nd

	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		Cond Avg		R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg
5		n Haz Waste		Non Haz Waste		Non Haz Waste		Nat Gas		Nat Gas		Nat Gas		Nat Gas		Total		Total		Total		Total
6	Feedstream Description	Resim. Dist.		Resim. Dist.		Resim. Dist.																
7	Feed Rate					1484236								446581								
8	Thermal Feedrate					1.6								20.4								42.9
9	Heating Value					500.0																
10	Viscosity					6.0																
11	Density					1.039																
12	Ash	140.816	nd	139.7	nd																	
13	Chlorine	140.816	nd	139.7	nd																	
14	Antimony	140.816	nd	13.97	nd																	
15	Arsenic	0.141	nd	0.14	nd																	
16	Barium	0.563	nd	0.559	nd																	
17	Beryllium	0.014	nd	0.014	nd																	
18	Cadmium	0.056	nd	0.006	nd																	
19	Chromium	0.073	nd	0.084	nd																	
20	Lead	7.041	nd	6.985	nd																	
21	Mercury	0.113	nd	0.112	nd																	
22	Silver	7.041	nd	6.985	nd																	
23	Thallium	112.652	nd	111.76	nd																	
24																						
25	Stack Gas Flowrate	9953		10678																		
26	Oxygen	7.4		6.4																		
27																						
28	Thermal Feedrate																					
29	Estimated Firing Rate																					
30																						
31	*Feedrate MTEC Calculati*																					
32	Ash	8.6	nd	7.4		8										131		100		114		115
33	Chlorine	8577.3	nd	7388.3		4106										5992		5946		5166		5701
34	Antimony	8577.3	nd	738.8																		
35	Arsenic	8.6	nd	7.4																		
36	Barium	34.3	nd	29.6																		
37	Beryllium	0.9	nd	0.7																		
38	Cadmium	3.4	nd	0.3																		
39	Chromium	4.4	nd	4.4																		
40	Lead	428.9	nd	369.4																		
41	Mercury	6.9	nd	5.9												4.8		4.8		4.2		5
42	Silver	428.9	nd	369.4																		
43	Thallium	6861.8	nd	5910.6																		
44																						
45	SVM	216.1		184.9		206										299.8		299.1		258.5		286
46	LVM	6.9		6.3		7										9.0		9.4		8.5		9
47																						
48	**840C2**	R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg
49		n Haz Waste		Non Haz Waste		Non Haz Waste		Nat Gas		Nat Gas		Nat Gas		Nat Gas		Total		Total		Total		Total
50	Feedstream Description	Resim. Dist.		Resim. Dist.		Resim. Dist.																
51	Feed Rate					1395426								446369								
52	Thermal Feedrate					1.5								18.9								41.9
53	Heating Value					500																
54	Viscosity					6.00																
55	Density					1.035																
56	Ash	139.428		139.428	nd	139.541																
57	Chlorine	139.428		139.428	nd	139.541																
58	Antimony	13.943		13.943	nd	13.954																
59	Arsenic	0.139		0.139	nd	0.14																
60	Barium	0.558		0.558	nd	0.559																

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
61	Beryllium		g/hr	nd	0.006	nd	0.006	nd	0.006											nd	0.014	nd
62	Cadmium		g/hr	nd	0.002	nd	0.002	nd	0.004											nd	0.006	nd
63	Chromium		g/hr	nd	0.023	nd	0.022	nd	0.022											nd	0.074	nd
64	Lead		g/hr	nd	2.817	nd	2.776	nd	2.787											nd	6.984	nd
65	Mercury		g/hr	nd	0.045	nd	0.044	nd	0.045											nd	0.112	nd
66	Silver		g/hr	nd	2.817	nd	2.776	nd	2.787											nd	6.984	nd
67	Thallium		g/hr	nd	45.07	nd	44.42	nd	44.591											nd	111.738	nd
68																						
69	Stack Gas Flowrate		dscfm		10638		11286		10234				10638		11286		10234				10638	
70	Oxygen		%		7.7		7.7		7.7				7.7		7.7		7.7				7.7	
71																						
72	Thermal Feedrate		MMBtu/hr																			
73	Estimated Firing Rate		MMBtu/hr																			
74																						
75	*Feedrate MTEC Calculations*																					
76	Ash		mg/dscm	nd	3.3	nd	3.0	nd	3.4		3.2		119.6		112.7		124.3		118.9	nd	8.1	nd
77	Chlorine		ug/dscm		3348.5	nd	3049.6	nd	3376.4		2187.2									nd	8139.2	nd
78	Antimony		ug/dscm	nd	328.1	nd	305.0	nd	337.6											nd	813.9	nd
79	Arsenic		ug/dscm	nd	3.3	nd	3.1	nd	8.4											nd	8.2	nd
80	Barium		ug/dscm	nd	13.1	nd	12.2	nd	13.5											nd	32.6	nd
81	Beryllium		ug/dscm	nd	0.3	nd	0.3	nd	0.4											nd	0.8	nd
82	Cadmium		ug/dscm	nd	0.12	nd	0.11	nd	0.24											nd	0.35	nd
83	Chromium		ug/dscm	nd	1.3	nd	1.2	nd	1.3											nd	4.3	nd
84	Lead		ug/dscm	nd	164.2	nd	152.5	nd	168.8											nd	407.0	nd
85	Mercury		ug/dscm	nd	2.6	nd	2.4	nd	2.7											nd	6.5	nd
86	Silver		ug/dscm	nd	164.2	nd	152.5	nd	168.8											nd	407.0	nd
87	Thallium		ug/dscm	nd	2626.4	nd	2439.9	nd	2701.1											nd	6511.5	nd
88																						
89	SVM		ug/dscm		82.1		76.3		84.5		81.0										203.7	
90	LVM		ug/dscm		2.5		2.3		5.1		3.3										6.6	
91																						
92	**840C3**				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1	
93					Haz Waste		Haz Waste		Haz Waste		Haz Waste		Non Haz Waste		Non Haz Waste		Non Haz Waste		Non Haz Waste			
94	Feedstream Description				Spent Monomer		Spent Monomer		Spent Monomer		Spent Monomer		Resim. Dist.		Resim. Dist.		Resim. Dist.		Resim. Dist.		Ash Spike	
95	Feed Rate		lb/hr		1202		1238		1226				2635		2575		2573				4.93	
96	Heating Value		Btu/lb								18667								250			
97	Viscosity		cp								3								3			
98	Density		g/ml								0.904								1.066			
99	Ash		%wt	nd	0.003		0.006	nd	0.003			nd	0.003	nd	0.003		0.01				100	
100	Chlorine		mg/kg		196	nd	200	nd	200			nd	200	nd	200	nd	200					
101	Antimony		mg/kg	nd	10	nd	10	nd	10			nd	10	nd	10	nd	10					
102	Arsenic		mg/kg		0.032	nd	0.017	nd	0.017			nd	0.017	nd	0.017	nd	0.017					
103	Barium		mg/kg	nd	0.39	nd	0.4	nd	0.39			nd	0.4	nd	0.38	nd	0.4					
104	Beryllium		mg/kg	nd	0.003	nd	0.003	nd	0.003			nd	0.003	nd	0.003	nd	0.003					
105	Cadmium		mg/kg	nd	0.003	nd	0.003	nd	0.003			nd	0.003	nd	0.003	nd	0.003					
106	Chromium		mg/kg		0.052		0.084	nd	0.033				0.083		0.063		0.084					
107	Lead		mg/kg	nd	4.9	nd	5	nd	4.9			nd	5.0	nd	4.8	nd	5.0					
108	Mercury		mg/kg	nd	0.08	nd	0.08	nd	0.08			nd	0.08	nd	0.08	nd	0.08					
109	Silver		mg/kg	nd	1	nd	1	nd	1			nd	1.0	nd	1.0	nd	1.0					
110	Thallium		mg/kg	nd	20	nd	20	nd	20			nd	20	nd	19	nd	20					
111																						
112	Stack Gas Flowrate		dscfm		10914		10920		10946				10914		10920		10946				10914	
113	Oxygen		%		8.97		7.73		7.47				8.97		7.73		7.47				8.97	
114																						
115	Thermal Feedrate		MMBtu/hr																			
116	Estimated Firing Rate		MMBtu/hr																			
117																						
118	*Feedrate MTEC Calculations*																					
119	Ash		mg/dscm	nd	1.03		1.92	nd	0.93		1.3	nd	2.25	nd	2.00		6.50		3.6		140.41	
120	Chlorine		ug/dscm		6717	nd	6396	nd	6197		4337.8	nd	15025	nd	13303	nd	13007		6889.1			

	B	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR
61	Beryllium	0.014		0.014	nd	0.014																
62	Cadmium	0.006		0.006	nd	0.006																
63	Chromium	0.081		0.084	nd	0.079																
64	Lead	6.971		6.971	nd	6.979																
65	Mercury	0.112		0.112	nd	0.112																
66	Silver	6.971		6.971	nd	6.976																
67	Thallium	111.542		111.542	nd	111.656																
68																						
69	Stack Gas Flowrate	11286		10234																		
70	Oxygen	7.7		7.7																		
71																						
72	Thermal Feedrate													18.9								
73	Estimated Firing Rate																					
74																						
75	*Feedrate MTEC Calculati*																					
76	Ash	7.7	nd	8.4		8.1										125		118		130		125
77	Chlorine	7658.6	nd	8445.8		4040.6										7418		5354		5911		6228
78	Antimony	765.9	nd	844.6																		
79	Arsenic	7.6	nd	8.4																		
80	Barium	30.7	nd	33.8																		
81	Beryllium	0.8	nd	0.8																		
82	Cadmium	0.33	nd	0.36																		
83	Chromium	4.4	nd	5.1																		
84	Lead	382.9	nd	422.3																		
85	Mercury	6.2	nd	6.8												4.6		4.3		4.8		4.5
86	Silver	382.9	nd	422.3																		
87	Thallium	6126.8	nd	6756.7																		
88																						
89	SVM	191.6		211.3		202.2										285.8		267.9		295.8		283
90	LVM	6.4		7.2		6.7										9.1		8.7		12.2		10.0
91																						
92	**840C3**	R2		R3		Cond Avg										R1		R2		R3		Cond Avg
93																Total		Total		Total		Total
94	Feedstream Description	Ash Spike		Ash Spike		Ash Spike																
95	Feed Rate	4.94		4.89																		
96	Heating Value																					
97	Viscosity																					
98	Density																					
99	Ash	100		100		2233																
100	Chlorine																					
101	Antimony																					
102	Arsenic																					
103	Barium																					
104	Beryllium																					
105	Cadmium																					
106	Chromium																					
107	Lead																					
108	Mercury																					
109	Silver																					
110	Thallium																					
111																						
112	Stack Gas Flowrate	10920		10946																		
113	Oxygen	7.73		7.47																		
114																						
115	Thermal Feedrate																					
116	Estimated Firing Rate																					
117																						
118	*Feedrate MTEC Calculati*																					
119	Ash	127.74		123.48		130.5										142		131		130		134
120	Chlorine															14229		9850		9602		11227

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
121	Antimony		ug/dscm	nd	343	nd	320	nd	310			nd	751	nd	665	nd	650					
122	Arsenic		ug/dscm		1.1	nd	0.5	nd	0.5			nd	1.3	nd	1.1	nd	1.1					
123	Barium		ug/dscm	nd	13	nd	13	nd	12			nd	30	nd	25	nd	26					
124	Beryllium		ug/dscm	nd	0.1	nd	0.1	nd	0.1			nd	0.2	nd	0.2	nd	0.2					
125	Cadmium		ug/dscm	nd	0.1	nd	0.1	nd	0.1			nd	0.2	nd	0.2	nd	0.2					
126	Chromium		ug/dscm		1.8		2.7	nd	1.0				6.2		4.2		5.5					
127	Lead		ug/dscm	nd	168	nd	160	nd	152			nd	376	nd	319	nd	325					
128	Mercury		ug/dscm	nd	2.7	nd	2.6	nd	2.5			nd	6.0	nd	5.3	nd	5.2					
129	Silver		ug/dscm	nd	34	nd	32	nd	31			nd	75	nd	67	nd	65					
130	Thallium		ug/dscm	nd	685	nd	640	nd	620			nd	1502	nd	1264	nd	1301					
131																						
132	SVM		ug/dscm		84.0		80.0		76.0		80.0		187.9		159.7		162.7		170.1			
133	LVM		ug/dscm		2.93		3.01		0.82		2.3		6.99		4.86		6.11		6.0			
134																						
135	**840C4**				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1	
136					Haz Waste		Haz Waste		Haz Waste		Haz Waste		Non Haz Waste		Non Haz Waste		Non Haz Waste		Non Haz Waste			
137	Feedstream Description				Spent Monomer		Spent Monomer		Spent Monomer		Spent Monomer		Resim. Dist.		Resim. Dist.		Resim. Dist.		Resim. Dist.		Ash Spike	
138	Feed Rate		lb/hr		1232		1229		1228		557919		2626		2596		2605		1183424		5.0	
139	Heating Value		Btu/lb								16300								250			
140	Viscosity		cp								3								3			
141	Density		g/ml								0.909								1.064			
142	Ash		wt%		0.003		0.005	nd	0.003				0.003		0.003	nd	0.003				100	
143	Chlorine		mg/kg		226	nd	200	nd	200			nd	200.0	nd	200.0	nd	200.0					
144	Antimony		mg/kg	nd	10	nd	10	nd	10			nd	10	nd	10	nd	10					
145	Arsenic		mg/kg	nd	0.017	nd	0.017	nd	0.017			nd	0.017	nd	0.017	nd	0.017					
146	Barium		mg/kg	nd	0.39	nd	0.38	nd	0.39			nd	0.4	nd	0.39	nd	0.4					
147	Beryllium		mg/kg	nd	0.003	nd	0.003	nd	0.003			nd	0.003	nd	0.003	nd	0.003					
148	Cadmium		mg/kg	nd	0.003	nd	0.003	nd	0.003			nd	0.003	nd	0.003	nd	0.003					
149	Chromium		mg/kg	nd	0.033	nd	0.033	nd	0.033				0.041		0.064		0.041					
150	Lead		mg/kg	nd	4.9	nd	4.8	nd	4.9			nd	5.0	nd	4.9	nd	5.0					
151	Mercury		mg/kg	nd	0.08	nd	0.08	nd	0.08			nd	0.08	nd	0.08	nd	0.08					
152	Silver		mg/kg	nd	1.0	nd	1.0	nd	1.0			nd	1.0	nd	1.0	nd	1.0					
153	Thallium		mg/kg	nd	20	nd	19	nd	19			nd	20	nd	20	nd	20					
154																						
155	Stack Gas Flowrate		dscfm		10374		10138		9880				10374		10138		9880				10374	
156	Oxygen		%		7.17		7.27		7.4				7.17		7.27		7.4				7.17	
157																						
158	Thermal Feedrate		MMBtu/hr																			
159	Estimated Firing Rate		MMBtu/hr																			
160																						
161	*Feedrate MTEC Calculations*																					
162	Ash		mg/dscm		1.0		1.7	nd	1.0	nd	1.2		2.1		2.1	nd	2.2		2.1		129.3	
163	Chlorine		ug/dscm		7264.4	nd	6610.1	nd	6841.9	nd	4663.4	nd	13702.6	nd	13962.3	nd	14514.0		7029.8			
164	Antimony		ug/dscm	nd	321.4	nd	330.5	nd	342.1	nd		nd	685.1	nd	698.1	nd	725.7					
165	Arsenic		ug/dscm	nd	0.5	nd	0.6	nd	0.6	nd		nd	1.2	nd	1.2	nd	1.2					
166	Barium		ug/dscm	nd	12.5	nd	12.6	nd	13.3	nd		nd	27.4	nd	27.2	nd	29.0					
167	Beryllium		ug/dscm	nd	0.1	nd	0.1	nd	0.1	nd		nd	0.2	nd	0.2	nd	0.2					
168	Cadmium		ug/dscm	nd	0.1	nd	0.1	nd	0.1	nd		nd	0.2	nd	0.2	nd	0.2					
169	Chromium		ug/dscm	nd	1.1	nd	1.1	nd	1.1	nd			2.8		4.5		3.0					
170	Lead		ug/dscm	nd	157.5	nd	158.6	nd	167.6	nd		nd	342.6	nd	342.1	nd	362.9					
171	Mercury		ug/dscm	nd	2.6	nd	2.6	nd	2.7	nd		nd	5.5	nd	5.6	nd	5.8					
172	Silver		ug/dscm	nd	32.1	nd	33.1	nd	34.2	nd		nd	68.5	nd	69.8	nd	72.6					
173	Thallium		ug/dscm	nd	642.9	nd	628.0	nd	650.0	nd		nd	1370.3	nd	1396.2	nd	1451.4					
174																						
175	SVM		ug/dscm		78.8		79.4		83.9		80.7		171.4		171.1		181.5		174.7			
176	LVM		ug/dscm		0.9		0.9		0.9		0.9		3.5		5.2		3.7		4.1			
177																						
178																						
179	**BIF Feedrate Limits**																					
180																						

	B	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR
121	Antimony																					
122	Arsenic																					
123	Barium																					
124	Beryllium																					
125	Cadmium																					
126	Chromium																					
127	Lead																					
128	Mercury															4.38		3.94		3.84		4.1
129	Silver																					
130	Thallium																					
131																						
132	SVM															272		240		239		250
133	LVM															9.9		7.9		6.9		8.2
134																						
135	**840C4**	R2		R3		Cond Avg										R1		R2		R3		Cond Avg
136																Total		Total		Total		Total
137	Feedstream Description	Ash Spike		Ash Spike		Ash Spike																
138	Feed Rate	5.0		4.9																		
139	Heating Value																					
140	Viscosity																					
141	Density																					
142	Ash	100		100		2248																
143	Chlorine																					
144	Antimony																					
145	Arsenic																					
146	Barium																					
147	Beryllium																					
148	Cadmium																					
149	Chromium																					
150	Lead																					
151	Mercury																					
152	Silver																					
153	Thallium																					
154																						
155	Stack Gas Flowrate	10138		9880		10130.7																
156	Oxygen	7.27		7.4		7.3																
157																						
158	Thermal Feedrate																					
159	Estimated Firing Rate													44.1								
160																						
161	*Feedrate MTEC Calculati*																					
162	Ash	133.3		137.8		133.4										132.3		137.0		139.4		136.2
163	Chlorine															14115.6		10286.2		10678.0		11693.3
164	Antimony																					
165	Arsenic																					
166	Barium																					
167	Beryllium																					
168	Cadmium																					
169	Chromium																					
170	Lead																					
171	Mercury															4.0		4.1		4.3		4.1
172	Silver																					
173	Thallium																					
174																						
175	SVM															250.2		250.5		265.4		255.4
176	LVM															4.3		6.0		4.6		5.0
177																						
178																						
179	**BIF Feedrate Limits**																					
180																						

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
181	Antimony		g/hr								245.0											
182	Arsenic		g/hr								1.9											
183	Barium		g/hr								40909.0											
184	Beryllium		g/hr								3.4											
185	Cadmium		g/hr								4.6											
186	Chromium		g/hr								0.7											
187	Lead		g/hr								73.6											
188	Mercury		g/hr								65.5											
189	Silver		g/hr								2455.0											
190	Thallium		g/hr								409.0											
191	Total Cl		g/hr								5950.0											

	B	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR
181	Antimony																					
182	Arsenic																					
183	Barium																					
184	Beryllium																					
185	Cadmium																					
186	Chromium																					
187	Lead																					
188	Mercury																					
189	Silver																					
190	Thallium																					
191	Total Cl																					

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