

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase II ID No.	911
4	EPA ID No.	OHD005108477
5	Facility Name	Sunoco Inc. (R&M) Haverhill Plant
6	Facility Location	
7	City	Haverhill
8	State	OH
9	Unit ID Name/No.	Unit 2001-UA
10	Other Sister Facilities	Units UB, UC (2 other identical units)
11	Number of Sister Facilities	2
12	Combustor Class	Liquid-fired boiler
13	Combustor Type	Liquid-fired
14	Combustor Characteristics	Watertube boiler. Riley/Union Iron Works, Model MH, 150,000 lb/hr steam, 183 MMBtu/hr
15	Capacity (MMBtu/hr)	183
16	Soot Blowing	Yes, 2 min per 8 hrs
17	APCS Detailed Acronym	None
18	APCS General Class	
19	APCS Characteristics	NA
20	Hazardous Wastes	Liq
21	Haz Waste Description	Liq organic wastes (benzene, waste lubricating oil, AMS distillation bottoms, phenol waste water, aniline distillation) including codes D001, D018, D035, K022
22	Supplemental Fuel	Natural gas, oil
23		fuel oil
24		
25	Stack Characteristics	
26	Diameter (ft)	4.9
27	Height (ft)	50.0
28	Gas Velocity (ft/sec)	59.7
29	Gas Temperature (°F)	509
30		
31	Permitting Status	Ajusted tier I for metals and chlorine
32	HWC Burn Status (Date if Terminated)	

	B	C
1	Cond Description	
2		
3	911C1	
4		
5	Report Name/Date	Revised Certification of Compliance, November 1996
6	Report Prepare	Radian International LLC
7	Testing Firm	ENSR Consulting and Engineering
8	Testing Dates	May 16, 1995
9	Cond Dates	May-95
10	Condition Descr	CoC; HHC waste fuel
11	Content	PM, CO, HCl/Cl2, Cr/Cr+6
12		
13	911C2	
14		
15	Report Name/Date	Revised Certification of Compliance, November 1996
16	Report Prepare	Radian International LLC
17	Testing Firm	ENSR Consulting and Engineering
18	Testing Dates	May 17-18, 1995
19	Cond Dates	May-95
20	Condition Descr	CoC; HHC waste fuel
21	Content	PM, CO, HCl/Cl2, Cr/Cr+6
22		
23	911C3	
24		
25	Report Name/Date	Revised Certification of Compliance, November 1996
26	Report Prepare	Radian International LLC
27	Testing Firm	ENSR Consulting and Engineering
28	Testing Dates	May 18-19, 1995
29	Cond Dates	May-95
30	Condition Descr	CoC; HHC waste fuel
31	Content	PM, CO, HCl/Cl2, Cr/Cr+6
32		
33	911C4	
34		
35	Report Name/Date	Revised Certification of Compliance, November 1996
36	Report Prepare	Radian International LLC
37	Testing Firm	ENSR Consulting and Engineering
38	Testing Dates	May 19-20, 1995
39	Cond Dates	May-95
40	Condition Descr	CoC; light HC waste
41	Content	PM, CO, HCl/Cl2, Cr/Cr+6
42		
43	911C5	
44		
45	Report Name/Date	Revised Certification of Compliance, January 1999
46	Report Prepare	Radian International LLC
47	Testing Firm	ENSR Consulting and Engineering
48	Testing Dates	July 8, 1998
49	Cond Dates	July-98
50	Condition Descr	CoC; LHC waste fuel
51	Content	PM, CO
52		
53	911C6	
54		
55	Report Name/Date	Revised Certification of Compliance, January 1999
56	Report Prepare	Radian International LLC
57	Testing Firm	ENSR Consulting and Engineering
58	Testing Dates	October 6, 1998
59	Cond Dates	October-98
60	Condition Descr	CoC; HHC waste fuel
61	Content	CO
62		
63	911C7	
64		
65	Report Name/Date	Revised Certification of Compliance, January 1999
66	Report Prepare	Radian International LLC
67	Testing Firm	ENSR Consulting and Engineering
68	Testing Dates	October 7, 1998
69	Cond Dates	October-98
70	Condition Descr	CoC; HHC waste fuel
71	Content	PM, CO

	B	C
72		
73	911C8	
74		
75	Report Name/Date	Trial Burn Report, February 2002
76	Report Prepare	URS Corp.
77	Testing Firm	URS Corp.
78	Testing Dates	11/6-7/2001
79	Cond Dates	November-01
80	Condition Descr	CoC; HHC waste fuel low range
81	Content	CO, DRE
82		
83	911C9	
84		
85	Report Name/Date	Trial Burn Report, February 2002
86	Report Prepare	URS Corp.
87	Testing Firm	URS Corp.
88	Testing Dates	11/10-11/2001
89	Cond Dates	November-01
90	Condition Descr	CoC; HHC waste fuel high range
91	Content	CO, DRE
92		
93	911C10	
94		
95	Report Name/Date	Trial Burn Report, February 2002
96	Report Prepare	URS Corp.
97	Testing Firm	URS Corp.
98	Testing Dates	11/5-6/2001
99	Cond Dates	November-01
100	Condition Descr	CoC; LHC waste fuel high range
101	Content	Metals, Cr+6, CO, DRE
102		
103	911C11	
104		
105	Report Name/Date	Trial Burn Report, February 2002
106	Report Prepare	URS Corp.
107	Testing Firm	URS Corp.
108	Testing Dates	11/9-12/2001
109	Cond Dates	November-01
110	Condition Descr	CoC; HHC waste fuel high range
111	Content	PM, HCl/Cl2, Metals, Cr+6, CO, DRE
112		
113	911C12	
114		
115	Report Name/Date	Trial Burn Report, February 2002
116	Report Prepare	URS Corp.
117	Testing Firm	URS Corp.
118	Testing Dates	11/13-14/2001
119	Cond Dates	November-01
120	Condition Descr	CoC; HHC waste fuel high range
121	Content	CO
122		
123	911C13	
124		
125	Report Name/Date	Trial Burn Report, February 2002
126	Report Prepare	URS Corp.
127	Testing Firm	URS Corp.
128	Testing Dates	11/14-16/2001
129	Cond Dates	November-01
130	Condition Descr	CoC; HHC waste fuel low range
131	Content	CO, D/F, PCB, PAH, VOC/SVOC, Aldehydes/ketones

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Stack Gas Emissions													
2														
3		Comments	Units	7% O2										
4								Sootblow						
5														
6	911C1					R1		R2		R3		R4		Cond Avg
7														
8	PM	E1	gr/dscf	y		0.0062		0.0182		0.0065				0.0083
9	CO (RA)	E1	ppmv	y		24.8		23.1		24.6				24.2
10	CO (MHRA)	E1	ppmv	y		29.7		29.5		29.8				29.7
11	HCl		g/hr	n	nd	24.49	nd	22.65	nd	23.88				
12	Cl2		g/hr	n	nd	24.77	nd	19.15	nd	21.81				
13	Chromium (Hex)		g/hr	n		1.91		5.09		1.21				2.15
14	Chromium		g/hr	n		4.08		8.36		3.98				4.75
15														
16	Sampling Train	PM, HCl/Cl2	E1											
17	Stack Gas Flowrate		dscfm			32257		32410		32305				32324.0
18	O2		%			3.8		4.17		3.3				3.8
19	Moisture		%			16.3		16.6		16.6				16.5
20	Temperature		°F			506		504		504				504.7
21														
22	Sampling Train	Cr (+6)	E2											
23	Stack Gas Flowrate		dscfm			33655		33480		33801				33645.3
24	O2		%			3.8		4.17		3.3				3.8
25	Moisture		%			13.7		14.4		13.1				13.7
26	Temperature		°F			507		502		505				504.7
27														
28	Sampling Train	Cr	E3											
29	Stack Gas Flowrate		dscfm			33282		32861		33065				33069.3
30	O2		%			3.8		4.17		3.3				3.8
31	Moisture		%			16.7		16.7		16.8				16.7
32	Temperature		°F			505		500		501				502.0
33														
34	HCl	E1	ppmv	y	nd	0.12	nd	0.11	nd	0.11				0.12
35	Cl2	E1	ppmv	y	nd	0.06	nd	0.05	nd	0.05				0.06
36	Total Chlorine	E1	ppmv	y		0.25		0.21		0.22				0.23
37	Chromium (Hex)	E2	µg/dscm	y		27.2		74.5		16.7				30.6
38	Chromium	E3	µg/dscm	y		58.8		124.6		56.1				68.7
39														
40														
41	911C2					R1		R2		R3		R4		Cond Avg
42														
43	PM	E1	gr/dscf	y		0.0073		0.0368		0.0157				0.0176
44	CO (RA)	E1	ppmv	y		17.2		19.7		9.6				15.5
45	CO (MHRA)	E1	ppmv	y		19		37.1		17				24.4
46	HCl		g/hr	n		599.4		709.1		733.9				677.2
47	Cl2		g/hr	n		87.2		11.8		12.9				40.5
48	Chromium (Hex)		g/hr	n		0.36		3.07		1.69				1.54
49	Chromium		g/hr	n		5.8		11.05		4.34				6.57
50														
51	Sampling Train	PM, HCl/Cl2	E1											
52	Stack Gas Flowrate		dscfm			30500		31292		31695				31162.3
53	O2		%			3.2		3.67		3.2				3.4
54	Moisture		%			17.3		17.4		17.1				17.3
55	Temperature		°F			523		516		520				519.7
56														
57	Sampling Train	Cr (+6)	E2											
58	Stack Gas Flowrate		dscfm			33288		31960		32329				32525.7
59	O2		%			3.2		3.67		3.2				3.4
60	Moisture		%			12.8		15.5		15.4				14.6
61	Temperature		°F			523		516		521				520.0
62														
63	Sampling Train	Cr	E3											
64	Stack Gas Flowrate		dscfm			32197		31901		31121				31739.7
65	O2		%			3.2		3.67		3.2				3.4
66	Moisture		%			17.4		17.3		17				17.2
67	Temperature		°F			520		513		519				517.3
68														
69	HCl	E1	ppmv	y		6.08		7.20		7.16				6.78
70	Cl2	E1	ppmv	y		0.45		0.06		0.06				0.21
71	Total Chlorine	E1	ppmv	y		6.99		7.32		7.29				7.20

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
72	Chromium (Hex)	E2	µg/dscm	y		5.0		45.7		24.2				22.1
73	Chromium	E3	µg/dscm	y		83.4		164.8		64.6				96.7
74														
75	911C3					R1		R2		R3		R4		Cond Avg
76														
77	PM	E1	gr/dscf	y		0.0146		0.0173		0.0196				0.0164
78	CO (RA)	E1	ppmv	y		1		3.5		45				16.5
79	CO (MHRA)	E1	ppmv	y		6.5		6		56.6				23.0
80	HCl		g/hr	n		972.1		835.5		793.6				890
81	Cl2		g/hr	n		27.2		19.4		24.9				23.5
82	Chromium (Hex)		g/hr	n		1.43		0.88		1.49				1.2
83	Chromium		g/hr	n		5.33		5.3		6.78				5.5
84														
85	Sampling Train	PM, HCl/Cl2	E1											
86	Stack Gas Flowrate		dscfm			32250		32301		31451				32000.7
87	O2		%			3.2		3.53		3.8				3.5
88	Moisture		%			15.9		14.9		15.6				15.5
89	Temperature		°F			529		531		534				531.3
90														
91	Sampling Train	Cr (+6)	E2											
92	Stack Gas Flowrate		dscfm			33339		33838		32520				33232.3
93	O2		%			3.2		3.53		3.8				3.5
94	Moisture		%			13.3		13.7		13.5				13.5
95	Temperature		°F			530		533		535				532.7
96														
97	Sampling Train	Cr	E3											
98	Stack Gas Flowrate		dscfm			32321		33062		32087				32490.0
99	O2		%			3.2		3.53		3.8				3.5
100	Moisture		%			15.7		15.4		16				15.7
101	Temperature		°F			529		530		531				530.0
102														
103	HCl	E1	ppmv	y		9.32		8.15		8.08				8.76
104	Cl2	E1	ppmv	y		0.13		0.10		0.13				0.12
105	Total Chlorine	E1	ppmv	y		9.59		8.35		8.34				8.99
106	Chromium (Hex)	E2	µg/dscm	y		19.9		12.3		22.0				17.0
107	Chromium	E3	µg/dscm	y		76.4		75.7		101.3				79.8
108														
109	911C4					R1		R2		R3		R4		Cond Avg
110														
111	PM	E1	gr/dscf	y		0.0254		0.0268		0.0237				0.0249
112	CO (RA)	E1	ppmv	y		24.5		15.8		27.9				22.7
113	CO (MHRA)	E1	ppmv	y		33.8		19.7		23.6				25.7
114	HCl		g/hr	n		1059		1165		1036				1067
115	Cl2		g/hr	n		20.9		22.7		16.5				19.4
116	Chromium (Hex)		g/hr	n		0.68		0.67		0.96				0.8
117	Chromium		g/hr	n		3.75		4.68		3.52				3.81
118														
119	Sampling Train	PM, HCl/Cl2	E1											
120	Stack Gas Flowrate		dscfm			32000		33243		32819				32687.3
121	O2		%			4.4		4.6		4.37				4.5
122	Moisture		%			12.5		11.9		12.8				12.4
123	Temperature		°F			542		551		549				547.3
124														
125	Sampling Train	Cr (+6)	E2											
126	Stack Gas Flowrate		dscfm			33693		33412		34121				33742.0
127	O2		%			4.4		4.6		4.37				4.5
128	Moisture		%			10.9		10.6		11.5				11.0
129	Temperature		°F			541		552		551				548.0
130														
131	Sampling Train	Cr	E3											
132	Stack Gas Flowrate		dscfm			33665		33984		33294				33647.7
133	O2		%			4.4		4.6		4.37				4.5
134	Moisture		%			11.9		12.4		12.7				12.3
135	Temperature		°F			540		551		549				546.7
136														
137	HCl	E1	ppmv	y		10.98		11.77		10.45				10.86
138	Cl2	E1	ppmv	y		0.11		0.12		0.09				0.10
139	Total Chlorine	E1	ppmv	y		11.20		12.00		10.62				11.07
140	Chromium (Hex)	E2	µg/dscm	y		10.0		10.1		13.9				11.8
141	Chromium	E3	µg/dscm	y		55.3		69.2		52.4				56.4
142														

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
143														
144	911C5					R1		R2		R3	R4			Cond Avg
145										sootblow				
146	PM	E1	gr/dscf	y		0.0019		0.0011		0.001				0.0013
147	CO (RA)	E1	ppmv	y		0		0		0				0.0
148	CO (MHRA)	E1	ppmv	y		0		0		0				0.0
149														
150	Sampling Train	PM	E1											
151	Stack Gas Flowrate		dscfm			33499		32993		32674				33055
152	O2		%			3.97		3.95		3.88				3.9
153	Moisture		%			15.3		14.8		14.8				15.0
154	Temperature		°F			427		431		430				429
155														
156	911C6					R1		R2		R3	R4			Cond Avg
157														
158	CO (RA)	E1	ppmv	y		0		0		0.1				0.0
159	CO (MHRA)	E1	ppmv	y		0		0		0.2				0.1
160														
161	911C7					R1		R2		R3				Cond Avg
162										sootblow				
163	PM	E1	gr/dscf	y		0.0175		0.0183		0.0215				0.0246
164	CO (RA)	E1	ppmv	y		1.2		0.3		0				0.5
165	CO (MHRA)	E1	ppmv	y		1.4		0.6		0.1				0.7
166														
167	Sampling Train	PM	E1											
168	Stack Gas Flowrate		dscfm			32302		31918		33179				32466
169	O2		%			2.8		3.3		3.3				3.1
170	Moisture		%			14.2		14.2		11.4				13.3
171	Temperature		°F			442		446		451				446
172														
173														
174	911C8					R1		R2		R3				Cond Avg
175										sootblow				
176	CO (RA)	E1	ppmv	y		0		3.4		0.3				1.2
177														
178	Sampling Train		E1											
179	Stack Gas Flowrate		dscfm			18136		19462		18248				18615
180	O2		%			5.2		4.6		6.1				5.3
181	Moisture		%			7.7		8.7		8.6				8.3
182	Temperature		°F			367		375		367				370
183														
184														
185	911C9					R1		R2		R3	R4			Cond Avg
186										sootblow				
187	CO (RA)	E1	ppmv	y		8.5		17.1		15.5	2.7			13.7
188														
189	Sampling Train		E1											
190	Stack Gas Flowrate		dscfm			30797		29148		30233	31533			30428
191	O2		%			2.7		2.5		2.4	3.1			2.7
192	Moisture		%			12.7		12.5		12.7	12.5			12.6
193	Temperature		°F			476		460		472	468			469
194														
195	911C10					R1		R2		R3	R4			Cond Avg
196														
197	CO (RA)	E1	ppmv	y		13.9		21.4		28				21.1
198														
199	Sampling Train	Metals	E1											
200	Stack Gas Flowrate		dscfm			28658		29951		29548				29386
201	O2		%			3.4		5.1		5.1				4.5
202	Moisture		%			15.8		13.6		14.1				14.5
203	Temperature		°F			469		456		455				460
204														
205	Antimony	E1	ug/dscm	y	nd	0.83	nd	0.88	nd	0.91				0.9
206	Arsenic	E1	ug/dscm	y	nd	2.05	nd	2.46	nd	1.28				1.9
207	Barium	E1	ug/dscm	y		49.2		54.19		58.67				54.0
208	Beryllium	E1	ug/dscm	y	nd	0.07	nd	0.06	nd	0.11				0.1
209	Cadmium	E1	ug/dscm	y		0.37		0.26		0.36				0.3
210	Chromium	E1	ug/dscm	y		22.69		34.07		32.98				29.9
211	Lead	E1	ug/dscm	y		24.57		17.3		26.36				22.7
212	Mercury	E1	ug/dscm	y	nd	0.27	nd	0.29	nd	0.41				0.3
213	Silver	E1	ug/dscm	y	nd	0.61	nd	1.88	nd	0.43				1.0

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
214	Thallium	E1	ug/dscm	y	nd	1.33	nd	0.59	nd	1.46				1.1
215	SVM	E1	ug/dscm	y		24.9		17.6		26.7				23.1
216	LVM	E1	ug/dscm	y		23.8		35.3		33.7				30.9
217														
218	Chromium (Hex)	E2	ug/dscm	y		4.78		36.82		3.25				15.0
219														
220														
221	911C11					R1		R2		R3		R4		Cond Avg
222														
223	CO (RA)	E1	ppmv	y		34.9		26.2		11				24.0
224	HCl	E1	ppmv	y		70		82		80				77
225	Cl2	E1	ppmv	y		21		17		17				19
226	Total Chlorine	E1	ppmv	y		112		117		114				114
227														
228	Sampling Train	HCl/Cl2	E1											
229	Stack Gas Flowrate		dscfm			29795		28677		29091				29188
230	O2		%			1.9		3		2.5				2.5
231	Moisture		%			13.3		13.2		13.1				13.2
232	Temperature		°F			466		454		463				461
233														
234	Sampling Train	Metals	E2											
235	Stack Gas Flowrate		dscfm			29882		31925		31672				31159.7
236	O2		%			2.8		4.9		3.6				3.8
237	Moisture		%			12.6		12.8		12.6				12.7
238	Temperature		°F			500		503		499				500.7
239														
240	Antimony	E2	ug/dscm	y	nd	0.74	nd	3.12	nd	0.75				1.5
241	Arsenic	E2	ug/dscm	y	nd	0.94		4.96	nd	2.06				2.7
242	Barium	E2	ug/dscm	y		45.75		49.53		48.95				48.1
243	Beryllium	E2	ug/dscm	y	nd	0.05		0.1	nd	0.09				0.1
244	Cadmium	E2	ug/dscm	y		0.45	nd	0.74		0.31				0.5
245	Chromium	E2	ug/dscm	y		9.8		48.21		21.19				26.4
246	Lead	E2	ug/dscm	y		9.46		23.76		20.03				17.8
247	Mercury	E2	ug/dscm	y	nd	0.12	nd	0.132	nd	0.13				0.1
248	Silver	E2	ug/dscm	y	nd	0.27	nd	0.019	nd	0.27				0.2
249	Thallium	E2	ug/dscm	y	nd	0.5	nd	0.08	nd	0.85				0.5
250	SVM	E2	ug/dscm	y		9.9		24.1		20.3				18.1
251	LVM	E2	ug/dscm	y		10.3		53.3		22.3				28.6
252														
253	Chromium (Hex)	E3	ug/dscm	y		10.86		9.89		22.17				14.3
254														
255														
256	911C12					R1		R2		R3		R4		Cond Avg
257										sootblow				
258	CO (RA)	E1	ppmv	y		4.2		2.2		1.4				2.6
259														
260	Sampling Train		E1											
261	Stack Gas Flowrate		dscfm			31121		31779		33461				32120
262	O2		%			3.3		2.9		3.7				3.3
263	Moisture		%			12.9		12.5		12.5				12.6
264	Temperature		°F			508		507		497				504
265														
266														
267	911C13					R1		R2		R3		R4		Cond Avg
268										sootblow				
269	CO (RA)	E1	ppmv	y		0		0		0.1				0.0
270														
271	Sampling Train		E1											
272	Stack Gas Flowrate		dscfm			20458		21582		19498				20513
273	O2		%			6.9		5.3		10.1				7.4
274	Moisture		%			8.4		8.5		8				8.3
275	Temperature		°F			394		403		388				395

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	Feedstreams																								
2																									
3																									
4	911C1																								
5	Feedstream Number																								
6	Feed Class																								
7	Feed Class 2																								
8	Feedstream Description																								
9	Feed Rate																								
10	Feed Rate																								
11	Feed Rate																								
12	Heating Value																								
13	Density																								
14	Ash																								
15	Chlorine																								
16	Antimony																								
17	Arsenic																								
18	Barium																								
19	Beryllium																								
20	Cadmium																								
21	Chromium																								
22	Lead																								
23	Mercury																								
24	Silver																								
25	Thallium																								
26	Stack Gas Flowrate																								
27	Stack Gas Flowrate																								
28	Oxygen																								
29																									
30	Thermal Feedrate																								
31	Estimated Firing Rate																								
32																									
33	Feedrate MTEC Calculations																								
34																									
35	Ash																								
36	Chlorine																								
37	Antimony																								
38	Arsenic																								
39	Barium																								
40	Beryllium																								
41	Cadmium																								
42	Chromium																								
43	Lead																								
44	Mercury																								
45	Silver																								
46	Thallium																								
47																									
48	SVM																								
49	LVM																								
50																									
51																									
52																									
53	911C2																								
54	Feedstream Number																								
55	Feed Class																								
56	Feed Class 2																								
57	Feedstream Description																								
58	Feed Rate																								
59	Feed Rate																								
60	Feed Rate																								

	B	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	Feedstreams									
2										
3										
4	911C1	Cond Avg	R1	R2	R3					Cond Avg
5	Feedstream Number	F3	F4	F4	F4					F4
6	Feed Class	NG	Total	Total	Total					Total
7	Feed Class 2	MF	Total	Total	Total					Total
8	Feedstream Description	Natural Gas	Total	Total	Total					Total
9	Feed Rate									
10	Feed Rate	117100								
11	Heating Value									
12	Density									
13	Ash									
14	Chlorine									
15	Antimony									
16	Arsenic									
17	Barium									
18	Beryllium									
19	Cadmium									
20	Chromium									
21	Lead									
22	Mercury									
23	Silver									
24	Thallium									
25	Stack Gas Flowrate									32324.0
26	Oxygen									3.8
27	Thermal Feedrate	117.1	156.5	1210.1	156.7					156.8
28	Estimated Firing Rate									176.9
29										
30	<i>Feedrate MTEC Calculatic</i>									
31										
32										
33										
34	Ash	0	37.1	0	34.6	0	37.9	0	36.5	36.5
35	Chlorine	0	4043.6	0	3286.1	0	1616.4	0	2982.0	2982.0
36	Antimony	100	16.9	100	17.3	100	16.5	100	16.9	16.9
37	Arsenic	100	8.4	100	8.7	100	8.3	100	8.4	8.4
38	Barium	100	16.9	100	17.3	100	16.5	100	16.9	16.9
39	Beryllium	100	5.1	100	5.2	100	5.0	100	5.1	5.1
40	Cadmium	100	1.7	100	1.7	100	1.7	100	1.7	1.7
41	Chromium	0	141.6	0	218.1	0	125.5	0	161.7	161.7
42	Lead	100	16.9	100	17.3	100	16.5	100	16.9	16.9
43	Mercury	100	1.7	100	1.7	100	1.7	100	1.7	1.7
44	Silver	100	16.9	100	17.3	100	16.5	100	16.9	16.9
45	Thallium	100	16.9	100	17.3	100	16.5	100	16.9	16.9
46										
47										
48	SVM	100	18.5	100	19.0	100	18.2	100	18.6	18.6
49	LVM	9	155.1	6	231.9	10	138.7	8	175.2	175.2
50										
51										
52										
53	911C2	Cond Avg	R1	R2	R3					Cond Avg
54	Feedstream Number	F3	F4	F4	F4					F4
55	Feed Class	NG	Total	Total	Total					Total
56	Feed Class 2	MF	Total	Total	Total					Total
57	Feedstream Description	Natural Gas	Total	Total	Total					Total
58	Feed Rate									
59	Feed Rate	106933								
60	Feed Rate									

B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
61	Heating Value	Btu/lb		15571	15686	15540	15599																	
62	Density	g/cc		1.12	1.12	1.12	1.12																	
63	Ash	g/hr		3915	3203	2313	3143.7																	
64	Chlorine	g/hr		391.5	391.5	113.5	298.8																	
65	Antimony	ppmw	nd	1	nd	1	1																	
66	Arsenic	ppmw	nd	0.5	nd	0.5	0.5																	
67	Barium	ppmw	nd	1	nd	1	1																	
68	Beryllium	ppmw	nd	0.3	nd	0.3	0.3																	
69	Cadmium	ppmw	nd	0.1	nd	0.1	0.1																	
70	Chromium	ppmw	nd	7.6	6.6	4.4	6.2																	
71	Lead	ppmw	nd	1	nd	1	1																	
72	Mercury	ppmw	nd	0.1	nd	0.1	0.1																	
73	Silver	ppmw	nd	1	nd	1	1																	
74	Thallium	ppmw	nd	1	nd	1	1																	
75	Stack Gas Flowrate	dscfm		30500	31292	31695	31162.3																	
76	Oxygen	%		3.2	3.67	3.2	3.4																	
77	Thermal Feedrate	MMBtu/hr		61.1	61.5	61.0	61.2																	
78	Estimated Firing Rate	MMBtu/hr																						
79	Feedrate MTEC Calculations																							
80	Ash	mg/dscm		59.5	48.7	33.8	47.3																	
81	Chlorine	ug/dscm		5946	5952	1659	4518.9																	
82	Antimony	ug/dscm	100	27.0	100	26.0	100																	
83	Arsenic	ug/dscm	100	13.5	100	13.0	100																	
84	Barium	ug/dscm	100	27.0	100	26.0	100																	
85	Beryllium	ug/dscm	100	8.1	100	7.8	100																	
86	Cadmium	ug/dscm	100	2.7	100	2.6	100																	
87	Chromium	ug/dscm	100	205.6	178.7	114.5	166.3																	
88	Lead	ug/dscm	100	27.0	100	26.0	100																	
89	Mercury	ug/dscm	100	2.7	100	2.6	100																	
90	Silver	ug/dscm	100	27.0	100	26.0	100																	
91	Thallium	ug/dscm	100	27.0	100	26.0	100																	
92	SVM	ug/dscm	100	29.8	100	28.6	100																	
93	LVM	ug/dscm	10	227.2	11	135.3	11																	
94																								
95																								
96																								
97																								
98																								
99																								
100	911C3			R1	R2	R3	Cond Avg																	
101	Feedstream Number			F1	F1	F1	F1																	
102	Feed Class			Liq HW	Liq HW	Liq HW	Liq HW																	
103	Feed Class 2			HW	HW	HW	HW																	
104	Feedstream Description			HHC waste	HHC waste	HHC waste	HHC waste																	
105	Feed Rate	lb/hr		5604	5604	5655	5621.0																	
106	Feed Rate	ft3/hr		15299	15427	15700	15475																	
107	Heating Value	Btu/lb		1.12	1.12	1.13	1.12																	
108	Density	g/cc		3305	3051	3334	3230.0																	
109	Ash	g/hr		381.3	254.2	179.5	271.7																	
110	Chlorine	ppmw	nd	1	nd	1	1																	
111	Antimony	ppmw	nd	0.5	nd	0.5	0.5																	
112	Arsenic	ppmw	nd	1	nd	1	1																	
113	Barium	ppmw	nd	0.3	nd	0.3	0.3																	
114	Beryllium	ppmw	nd	0.1	nd	0.1	0.1																	
115	Cadmium	ppmw	nd	4.2	4.6	4.5	4.4																	
116	Chromium	ppmw	nd	1	nd	1	1																	
117	Lead	ppmw	nd	0.1	nd	0.1	0.1																	
118	Mercury	ppmw	nd	1	nd	1	1																	
119	Silver	ppmw	nd	1	nd	1	1																	
120	Thallium	ppmw	nd	1	nd	1	1																	

	B	AB	AC	AD	AE	AF	AG	AH	AI	AJ
61	Heating Value									
62	Density									
63	Ash									
64	Chlorine									
65	Antimony									
66	Arsenic									
67	Barium									
68	Beryllium									
69	Cadmium									
70	Chromium									
71	Lead									
72	Mercury									
73	Silver									
74	Thallium									
75										
76	Stack Gas Flowrate			30500		31292		31695		31162.3
77	Oxygen			3.2		3.67		3.2		3.4
78										
79	Thermal Feedrate			178.2		178.5		167.6		168.1
80	Estimated Firing Rate		106.933	172.3		172.2		179.1		174.5
81										
82	Feedrate MTEC Calculatic									
83	Ash		0	154.9	0	144.3	0	125.7	0	141.6
84	Chlorine		0	16758.8	0	16777.6	0	12064.1	0	15196.2
85	Antimony		100	27.0	100	27.1	100	26.0	100	26.7
86	Arsenic		100	13.5	100	13.5	100	13.0	100	13.4
87	Barium		100	27.0	100	27.1	100	26.0	100	26.7
88	Beryllium		100	8.1	100	8.1	100	7.8	100	8.0
89	Cadmium		100	2.7	100	2.7	100	2.6	100	2.7
90	Chromium		100	205.6		178.7		114.5		166.3
91	Lead		100	27.0	100	27.1	100	26.0	100	26.7
92	Mercury		100	2.7	100	2.7	100	2.6	100	2.7
93	Silver		100	27.0	100	27.1	100	26.0	100	26.7
94	Thallium		100	27.0	100	27.1	100	26.0	100	26.7
95										
96	SVM		100	29.8	100	29.8	100	28.6	100	29.4
97	LVM		10	227.2	11	200.4	15	135.3	11	187.6
98										
99										
100	911C3									
101			Cond Avg	R1		R2		R3		Cond Avg
102	Feedstream Number									
103	Feed Class		F3	F4		F4		F4		F4
104	Feed Class 2		NG	Total		Total		Total		Total
105	Feedstream Description		MF	Total		Total		Total		Total
106	Feed Rate		Natural Gas							
107	Feed Rate									
108	Heating Value		90100							
109	Density									
110	Ash									
111	Chlorine									
112	Antimony									
113	Arsenic									
114	Barium									
115	Beryllium									
116	Cadmium									
117	Chromium									
118	Lead									
119	Mercury									
120	Silver									

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	
121	Thallium		ppmw	nd				1	nd																		
122	Stack Gas Flowrate		dscfm		32250	32301	31451	32000.667					32250	32301	31451	32000.67											
123	Oxygen		%		3.2	3.53	3.8	3.51					3.2	3.53	3.8	3.51											
124	Thermal Feedrate		MMBtu/hr		85.7	86.5	88.8	87.0																			
125	Estimated Firing Rate		MIMBtu/hr																								
126	Feedrate MTEC Calculations																										
127	Ash		mg/dscm		47.5	44.6	50.8	47.6					67.2	68.5	71.5	69.0											
128	Chlorine		ug/dscm		5477	3714	2736	3975.5					14535	14845	15485	14947											
129	Antimony		ug/dscm	100	36.5	100	39.1	100																			
130	Arsenic		ug/dscm	100	18.3	100	19.6	100																			
131	Barium		ug/dscm	100	36.5	100	39.1	100																			
132	Beryllium		ug/dscm	100	11.0	100	11.7	100																			
133	Cadmium		ug/dscm	100	3.7	100	3.9	100																			
134	Chromium		ug/dscm		153.5	171.0	166.9																				
135	Lead		ug/dscm	100	36.5	100	39.1	100																			
136	Mercury		ug/dscm	100	3.7	100	3.9	100																			
137	Silver		ug/dscm	100	36.5	100	39.1	100																			
138	Thallium		ug/dscm	100	36.5	100	39.1	100																			
139	SVM		ug/dscm	100	40.2	100	40.9	100																			
140	LVM		ug/dscm	16	182.7	15	207.4	15																			
141																											
142																											
143																											
144																											
145																											
146																											
147																											
148	911C4																										
149																											
150	Feedstream Number																										
151	Feed Class				F1	F1	F1	F1																			
152	Feed Class 2				Liq HW	Liq HW	Liq HW	Liq HW																			
153	Feedstream Description				LHC waste	LHC waste	LHC waste	LHC waste																			
154	Feed Rate		lb/hr		9555	9611	9475	9547																			
155	Feed Rate		ft3/hr		17277	17287	17018	17144																			
156	Heating Value		Btu/lb		0.905	0.906	0.906	0.906																			
157	Density		g/cc																								
158	Ash		g/hr		1907	959	1633	1500																			
159	Chlorine		ppmw		1	1	1	1																			
160	Antimony		ppmw	nd	0.5	nd	0.5	0.5																			
161	Arsenic		ppmw	nd	1	nd	1	1																			
162	Barium		ppmw	nd	0.3	nd	0.3	0.3																			
163	Beryllium		ppmw	nd	0.1	nd	0.1	0.1																			
164	Cadmium		ppmw	nd	0.1	nd	0.1	0.1																			
165	Chromium		ppmw	nd	0.1	nd	0.1	0.1																			
166	Lead		ppmw	nd	1	nd	1	1																			
167	Mercury		ppmw	nd	0.1	nd	0.1	0.1																			
168	Silver		ppmw	nd	1	nd	1	1																			
169	Thallium		ppmw	nd	1	nd	1	1																			
170																											
171	Stack Gas Flowrate		dscfm		32000	33243	32819	32687.3					32000	33243	32819	32687.3											
172	Oxygen		%		4.4	4.6	4.37	4.5					4.4	4.6	4.37	4.5											
173																											
174	Thermal Feedrate		MIMBtu/hr		165.1	166.1	161.2	163.7																			
175	Estimated Firing Rate		MIMBtu/hr																								
176	Feedrate MTEC Calculations																										
177	Ash		mg/dscm		0.0	0.0	0.0	0.0					148.4	144.5	144.5	145.7											
178	Chlorine		ug/dscm		29599	14503	24669	22924.0					19992	19479	19458	19638											
179	Antimony		ug/dscm	nd	67.3	nd	65.0	33.1																			
180																											

	B	AB	AC	AD	AE	AF	AG	AH	AI	AJ
121	Thallium									
122	Stack Gas Flowrate			32250		32301		31451		32000.67
123	Oxygen			3.2		3.53		3.8		3.51
124	Thermal Feedrate	90.1		175.8		176.6		179.0		177.1
125	Estimated Firing Rate			182.2		179.1		171.7		177.7
126	Feedrate MTEC Calculatic									
127	Ash			114.7		113.1		122.3		116.7
128	Chlorine			20011.8		18559.0		18221.2		18922.9
129	Antimony		100	36.5 100		37.2 100		39.1 100		37.6
130	Arsenic		100	18.3 100		18.6 100		19.6 100		18.8
131	Barium		100	36.5 100		37.2 100		39.1 100		37.6
132	Beryllium		100	11.0 100		11.2 100		11.7 100		11.3
133	Cadmium		100	3.7 100		3.7 100		3.9 100		3.8
134	Chromium		100	153.5		171.0		176.1		166.9
135	Lead		100	36.5 100		37.2 100		39.1 100		37.6
136	Mercury		100	3.7 100		3.7 100		3.9 100		1.9
137	Silver		100	36.5 100		37.2 100		39.1 100		37.6
138	Thallium		100	36.5 100		37.2 100		39.1 100		37.6
139	SVM		100	40.2 100		40.9 100		43.0 100		41.4
140	LVM		16	182.7 15		200.7 15		207.4 15		196.9
141										
142										
143										
144										
145										
146										
147										
148	911C4	Cond Avg		R1		R2		R3		Cond Avg
149	Feedstream Number	F3		F4		F4		F4		F4
150	Feed Class	NG		Total		Total		Total		Total
151	Feed Class 2	MF		Total		Total		Total		Total
152	Feedstream Description	Natural Gas		Total		Total		Total		Total
153	Feed Rate									
154	Feed Rate	23700								
155	Heating Value									
156	Density									
157	Ash									
158	Chlorine									
159	Antimony									
160	Arsenic									
161	Barium									
162	Beryllium									
163	Cadmium									
164	Chromium									
165	Lead									
166	Mercury									
167	Silver									
168	Thallium									
169	Stack Gas Flowrate			32000		33243		32819		32687.3
170	Oxygen			4.4		4.6		4.37		4.5
171	Thermal Feedrate	23.7		187.4		187.5		188.6		187.4
172	Estimated Firing Rate			168.6		173.1		173.3		171.7
173	Feedrate MTEC Calculatic									
174	Ash			148.4		144.5		144.5		145.7
175	Chlorine			49591.0		33982.0		44127.0		42562.3
176	Antimony			33.7		33.0		32.5		33.1

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA
181	Arsenic		ug/dscm	nd		33.7	nd	33.0	nd		32.5															
182	Barium		ug/dscm	nd		67.3	nd	66.0	nd		65.0															
183	Beryllium		ug/dscm	nd		20.2	nd	19.8	nd		19.5															
184	Cadmium		ug/dscm	nd		6.7	nd	6.6	nd		6.5															
185	Chromium		ug/dscm	nd		6.7	nd	6.6	nd		6.5															
186	Lead		ug/dscm	nd		67.3	nd	66.0	nd		65.0															
187	Mercury		ug/dscm	nd		6.7	nd	6.6	nd		6.5															
188	Silver		ug/dscm	nd		67.3	nd	66.0	nd		65.0															
189	Thallium		ug/dscm	nd		67.3	nd	66.0	nd		65.0															
190	SVM		ug/dscm			37.0		36.3			35.7															
191	LVM		ug/dscm			33.7		33.0			32.5															
192																										
193																										
194	911C5																									
195																										
196																										
197	Feedstream Number																									
198	Feed Class																									
199	Feed Class 2																									
200	Feedstream Description																									
201	Feed Rate		lb/hr																							
202	Heating Value		Btu/lb																							
203	Density		g/cc																							
204	Ash		g/hr	nd		2,265	nd	2,265	nd		2,265															
205	Chlorine		g/hr			502		564			589															
206	Antimony		g/hr	nd		2.06	nd	2.06	nd		2.06															
207	Arsenic		g/hr	nd		1.03	nd	1.03	nd		1.03															
208	Barium		g/hr	nd		2.06	nd	2.06	nd		2.06															
209	Beryllium		g/hr	nd		2.06	nd	2.06	nd		2.06															
210	Cadmium		g/hr	nd		2.06	nd	2.06	nd		2.06															
211	Chromium		g/hr	nd		2.06	nd	2.06	nd		2.06															
212	Lead		g/hr	nd		2.06	nd	2.06	nd		2.06															
213	Mercury		g/hr	nd		2.06	nd	2.06	nd		2.06															
214	Silver		g/hr	nd		2.06	nd	2.06	nd		2.06															
215	Thallium		g/hr	nd		2.06	nd	2.06	nd		2.06															
216																										
217	Stack Gas Flowrate		dscfm			33499		32993			32674															
218	Oxygen		%			3.97		3.95			3.88															
219																										
220	Thermal Feedrate		MMBtu/hr			75.5		74.0			75.3															
221																										
222	Feedrate MTEC Calculations																									
223	Ash		mg/dscm			0.033		0.033			0.033															
224	Chlorine		ug/dscm			7255		8267			8682															
225	Antimony		ug/dscm	nd		30	nd	30	nd		30															
226	Arsenic		ug/dscm	nd		15	nd	15	nd		15															
227	Barium		ug/dscm	nd		30	nd	30	nd		30															
228	Beryllium		ug/dscm	nd		30	nd	30	nd		30															
229	Cadmium		ug/dscm	nd		30	nd	30	nd		30															
230	Chromium		ug/dscm	nd		30	nd	30	nd		30															
231	Lead		ug/dscm	nd		30	nd	30	nd		30															
232	Mercury		ug/dscm	nd		30	nd	30	nd		30															
233	Silver		ug/dscm	nd		30	nd	30	nd		30															
234	Thallium		ug/dscm	nd		30	nd	30	nd		30															
235	SVM		ug/dscm			44.7		45.3			45.5															
236	LVM		ug/dscm			37.2		37.7			53.1															
237																										
238																										
239	911C6																									
240																										

	B	AB	AC	AD	AE	AF	AG	AH	AI	AJ
181	Arsenic			16.8		16.5		16.2		16.5
182	Barium			33.7		33.0		32.5		33.1
183	Beryllium			10.1		9.9		9.7		9.9
184	Cadmium			3.4		3.3		3.2		3.3
185	Chromium			6.7		6.6		6.5		6.6
186	Lead			33.7		33.0		32.5		33.1
187	Mercury			3.4		3.3		3.2		3.3
188	Silver			33.7		33.0		32.5		33.1
189	Thallium			33.7		33.0		32.5		33.1
190	SVM			37.0		36.3		35.7		36.4
191	LVM			33.7		33.0		32.5		33.1
192										
193										
194	911C5									
195										
196										
197	Feedstream Number									
198	Feed Class									
199	Feed Class 2									
200	Feedstream Description									
201	Feed Rate									
202	Heating Value									
203	Density									
204	Ash									
205	Chlorine									
206	Antimony									
207	Arsenic									
208	Barium									
209	Beryllium									
210	Cadmium									
211	Chromium									
212	Lead									
213	Mercury									
214	Silver									
215	Thallium									
216										
217	Stack Gas Flowrate									
218	Oxygen									
219										
220	Thermal Feedrate									
221										
222	<i>Feedrate MTEC Calculatic</i>									
223	Ash									
224	Chlorine									
225	Antimony									
226	Arsenic									
227	Barium									
228	Beryllium									
229	Cadmium									
230	Chromium									
231	Lead									
232	Mercury									
233	Silver									
234	Thallium									
235	SVM									
236	LVM									
237										
238										
239	911C6									
240										

B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
241	Feedstream Number																							
242	Feed Class			F1	Liq HW	Liq HW	F1	Liq HW	Liq HW	F1	Liq HW	Liq HW	F1	Liq HW	Liq HW	F1	Liq HW	Liq HW	F1	Liq HW	Liq HW	F1	Liq HW	
243	Feed Class 2			Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	
244	Feedstream Description			LHC waste	LHC waste	LHC waste	LHC waste	LHC waste	LHC waste	LHC waste	LHC waste	LHC waste	LHC waste	LHC waste	LHC waste	LHC waste	LHC waste	LHC waste	LHC waste	LHC waste	LHC waste	LHC waste	LHC waste	
245	Feed Rate	lb/hr		2267	2267	2267	2267	2267	2267	2267	2267	2267	2267	2267	2267	2267	2267	2267	2267	2267	2267	2267	2267	
246	Thermal Feedrate	MMBtu/hr		37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	
248																								
249																								
250	911C7			R1	R2	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	
251				Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	
252																								
253	Feedstream Number			F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	
254	Feed Class			Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	
255	Feed Class 2			HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	
256	Feedstream Description			HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	
257	Feed Rate	lb/hr		4534	4534	4534	4534	4534	4534	4534	4534	4534	4534	4534	4534	4534	4534	4534	4534	4534	4534	4534	4534	
258	Density	g/cc		0.906	0.906	0.906	0.906	0.906	0.906	0.906	0.906	0.906	0.906	0.906	0.906	0.906	0.906	0.906	0.906	0.906	0.906	0.906	0.906	
259	Ash	g/hr		254	509	254	254	254	254	254	254	254	254	254	254	254	254	254	254	254	254	254	254	
260	Chlorine	g/hr		549	318	321	321	321	321	321	321	321	321	321	321	321	321	321	321	321	321	321	321	
261	Antimony	g/hr	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	
262	Arsenic	g/hr	nd	1.27	nd	1.27	nd	1.27	nd	1.27	nd	1.27	nd	1.27	nd	1.27	nd	1.27	nd	1.27	nd	1.27	nd	
263	Barium	g/hr	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	
264	Beryllium	g/hr	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	
265	Cadmium	g/hr	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	
266	Chromium	g/hr	nd	1.02	0.763	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	
267	Lead	g/hr	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	
268	Mercury	g/hr	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	0.254	nd	
269	Silver	g/hr	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	
270	Thallium	g/hr	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	2.54	nd	
271																								
272	Stack Gas Flowrate	dscfm		32302	31918	33179	33179	33179	33179	33179	33179	33179	33179	33179	33179	33179	33179	33179	33179	33179	33179	33179	33179	
273	Oxygen	%		2.8	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
274																								
275	Thermal Feedrate	MMBtu/hr		88.5	88.4	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6	
276																								
277	Feedrate MTEC Calculations																							
278	Ash	mg/dscm		3.6	7.4	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
279	Chlorine	ug/dscm		7699	4641	4507	4507	4507	4507	4507	4507	4507	4507	4507	4507	4507	4507	4507	4507	4507	4507	4507	4507	
280	Antimony	ug/dscm	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	
281	Arsenic	ug/dscm	nd	18	nd	18	nd	18	nd	18	nd	18	nd	18	nd	18	nd	18	nd	18	nd	18	nd	
282	Barium	ug/dscm	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	
283	Beryllium	ug/dscm	nd	4	nd	4	nd	4	nd	4	nd	4	nd	4	nd	4	nd	4	nd	4	nd	4	nd	
284	Cadmium	ug/dscm	nd	4	nd	4	nd	4	nd	4	nd	4	nd	4	nd	4	nd	4	nd	4	nd	4	nd	
285	Chromium	ug/dscm	nd	14	11	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
286	Lead	ug/dscm	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	
287	Mercury	ug/dscm	nd	4	nd	4	nd	4	nd	4	nd	4	nd	4	nd	4	nd	4	nd	4	nd	4	nd	
288	Silver	ug/dscm	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	
289	Thallium	ug/dscm	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	36	nd	
290	SVM	ug/dscm	nd	19.6	20.4	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	
291	LVM	ug/dscm		25.0	22.3	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	
292																								
293																								
294	911C8			R1	R2	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	
295				Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	Cond Avg	
296																								
297	Feedstream Number			F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	
298	Feed Class			Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	
299	Feed Class 2			HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	HW	
300	Feedstream Description			HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	

	B	AB	AC	AD	AE	AF	AG	AH	AI	AJ
241	Feedstream Number									
242	Feed Class									
243	Feed Class 2									
244	Feedstream Description									
245	Feed Rate									
246										
247	Thermal Feedrate									
248										
249										
250	911C7	Cond Avg								
251										
252										
253	Feedstream Number	F3								
254	Feed Class	Total								
255	Feed Class 2	Total								
256	Feedstream Description	Total								
257	Feed Rate									
258	Density									
259	Ash	8006								
260	Chlorine									
261	Antimony									
262	Arsenic									
263	Barium									
264	Beryllium									
265	Cadmium									
266	Chromium									
267	Lead									
268	Mercury									
269	Silver									
270	Thallium									
271										
272	Stack Gas Flowrate									
273	Oxygen									
274										
275	Thermal Feedrate	88.5								
276										
277	Feedrate MTEC Calculatic									
278	Ash	114								
279	Chlorine	5616								
280	Antimony	36								
281	Arsenic	18								
282	Barium	36								
283	Beryllium	4								
284	Cadmium	4								
285	Chromium	13								
286	Lead	36								
287	Mercury	4								
288	Silver	36								
289	Thallium	36								
290	SVM	20								
291	LVM	24								
292										
293										
294	911C8	Cond Avg								
295										
296										
297	Feedstream Number	F3								
298	Feed Class	Total								
299	Feed Class 2	Total								
300	Feedstream Description	Total								

B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA
301	Feed Rate	lb/hr		5448		5592		5574		5538															
302	Heating Value	Btu/lb		15620		15620		15620		15620															
303	Ash	g/hr		2177		3538		2177		2631															
304																									
305	Ash	mg/dscm	y	62.6		91.4		66.0		73.4										62.6		91.4		66.0	
306																									
307	Stack Gas Flowrate	dscfm	E1	18136		19462		18248		18615															
308	Oxygen	%		5.2		4.6		6.1		5.3															
309																									
310	Thermal Feedrate	MMBtu/hr		85.1		87.3		87.1		87		2.7		0.0		1.3		1.3		87.8		87.3		88.4	
311																									
312																									
313	911C9																								
314																									
315	Feedstream Number																								
316	Feed Class																								
317	Feed Class 2																								
318	Feedstream Description																								
319	Feed Rate	lb/hr		5580		5580		5580		5580		5580													
320	Heating Value	Btu/lb		15620		15620		15620		15620		15620													
321	Ash	g/hr		2177		3538		2177		2177		2517													
322																									
323																									
324	Ash	mg/dscm	y	31.9		54.1		31.9		31.8		37													31.9
325																									
326	Stack Gas Flowrate	dscfm		30797		29148		30233		31533		30428													
327	Oxygen	%		2.7		2.5		2.4		3.1		2.7													
328																									
329	Thermal Feedrate	MMBtu/hr		87.2		87.2		87.2		87.2		87		63.8		63.9		65.8		65.9		64.9		151.0	
330																									
331																									
332	911C10																								
333																									
334	Feedstream Number																								
335	Feed Class																								
336	Feed Class 2																								
337	Feedstream Description																								
338	Feed Rate	lb/hr		4374		4380		4374		4376		4374													
339	Heating Value	Btu/lb		17240		17240		17240		17240		17240													
340	Ash	g/hr		1089		1089		272		816		816													
341	Chlorine	g/hr		168.7		151		156.8		159		159													
342	Antimony	g/hr	nd	0.99	nd	0.99	nd	0.99	1	1		1													
343	Arsenic	g/hr	nd	0.99	nd	0.99	nd	0.99	1	1		1													
344	Barium	g/hr	nd	0.3	nd	0.3	nd	0.3	0.3	0.3		0.3													
345	Beryllium	g/hr	nd	0.3	nd	0.3	nd	0.3	0.3	0.3		0.3													
346	Cadmium	g/hr	nd	0.2	nd	0.2	nd	0.2	0.2	0.2		0.2													
347	Chromium	g/hr	nd	0.99	nd	0.99	nd	0.99	0.99	0.99		0.99													
348	Lead	g/hr	nd	0.99	nd	0.99	nd	0.99	0.99	0.99		0.99													
349	Mercury	g/hr	nd	0.04	nd	0.04	nd	0.04	0.04	0.04		0.04													
350	Silver	g/hr	nd	0.4	nd	0.4	nd	0.4	0.4	0.4		0.4													
351	Thallium	g/hr	nd	0.99	nd	0.99	nd	0.99	0.99	0.99		0.99													
352																									
353																									
354	Stack Gas Flowrate	dscfm		28658		29951		29548		29386		29386													
355	Oxygen	%		3.4		5.1		5.1		4.5		4.5													
356																									
357	Thermal Feedrate	MMBtu/hr		75.4		75.5		75.4		75		77.0		76.5		75.5		76		152.4		152.0		150.9	
358																									
359	Feedrate MTEC Calculations																								
360	Ash	mg/dscm		17.8		18.8		4.8		13.8		4.8													

	B	AB	AC	AD	AE	AF	AG	AH	AI	AJ
301	Feed Rate									
302	Heating Value									
303	Ash									
304										
305	Ash	73.4								
306										
307	Stack Gas Flowrate									
308	Oxygen									
309										
310	Thermal Feedrate	87.8								
311										
312										
313	911C9									
314					R2	R4		Cond Avg		
315										
316	Feedstream Number				F3	F3		F3		
317	Feed Class				Total	Total		Total		
318	Feed Class 2				Total	Total		Total		
319	Feedstream Description				Total	Total		Total		
320	Feed Rate									
321	Heating Value									
322	Ash									
323										
324	Ash	54.1			31.9	31.8		37.4		
325										
326	Stack Gas Flowrate									
327	Oxygen									
328										
329	Thermal Feedrate	151.1			153.0	153.1		152		
330										
331										
332	911C10									
333										
334										
335	Feedstream Number									
336	Feed Class				F3	F3		Total		
337	Feed Class 2				Total	Total		Total		
338	Feedstream Description				Total	Total		Total		
339	Feed Rate									
340	Heating Value									
341	Ash									
342	Chlorine									
343	Antimony									
344	Arsenic									
345	Barium									
346	Beryllium									
347	Cadmium									
348	Chromium									
349	Lead									
350	Mercury									
351	Silver									
352	Thallium									
353										
354	Stack Gas Flowrate									
355	Oxygen									
356										
357	Thermal Feedrate	152								
358										
359	Feedrate MTEC Calculatic									
360	Ash	13.8								

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A
361	Chlorine		ug/dscm		2758		2614		2752		2708										2757.7	2614.3			2751.8	
362	Antimony		ug/dscm	nd	16	nd	17	nd	17		8										16.2	17.1			17.4	
363	Arsenic		ug/dscm	nd	16	nd	17	nd	17		8										16.2	17.1			17.4	
364	Barium		ug/dscm	nd	5	nd	5	nd	5		3										4.9	5.2			5.3	
365	Beryllium		ug/dscm	nd	5	nd	5	nd	5		3										4.9	5.2			5.3	
366	Cadmium		ug/dscm	nd	3	nd	3	nd	4		2										3.3	3.5			3.5	
367	Chromium		ug/dscm	nd	16	nd	17	nd	17		8										16.2	17.1			17.4	
368	Lead		ug/dscm	nd	16	nd	17	nd	17		8										16.2	17.1			17.4	
369	Mercury		ug/dscm	nd	1	nd	1	nd	1		0										0.7	0.7			0.7	
370	Silver		ug/dscm	nd	7	nd	7	nd	7		3										6.5	6.9			7.0	
371	Thallium		ug/dscm	nd	16	nd	17	nd	17		8										16.2	17.1			17.4	
372	SVM		ug/dscm		10		10		10		10										9.7	10.3			10.4	
373	LVM		ug/dscm		19		20		20		19										18.6	19.7			20.0	
374																										
375																										
376																										
377																										
378																										
379	Feedstream Number																									
380	Feed Class																									
381	Feed Class 2																									
382	Feedstream Description																									
383	Feed Rate		lb/hr		5580		5556		5580		5572															
384	Heating Value		Btu/lb		15620		15620		15620		15620															
385	Ash		g/hr	nd	544	nd	544	nd	544		544															
386	Chlorine		g/hr																							
387	Antimony		g/hr	nd	1.27	nd	1.26	nd	1.26		1															
388	Arsenic		g/hr	nd	1.27	nd	1.26	nd	1.26		1															
389	Barium		g/hr	nd	0.38	nd	0.38	nd	0.61		0.5															
390	Beryllium		g/hr	nd	0.38	nd	0.38	nd	0.38		0.4															
391	Cadmium		g/hr	nd	0.25	nd	0.25	nd	0.25		0.3															
392	Chromium		g/hr	nd	1.49		1.89		1.49		1.62															
393	Lead		g/hr	nd	1.27	nd	1.26	nd	1.26		1.26															
394	Mercury		g/hr	nd	0.05	nd	0.05	nd	0.05		0.05															
395	Silver		g/hr	nd	0.51	nd	0.5	nd	0.51		0.51															
396	Thallium		g/hr	nd	1.27	nd	1.26	nd	1.26		1.26															
397																										
398	Stack Gas Flowrate		dscfm		29882		31925		31672		31160															
399	Oxygen		%		2.8		4.9		3.6		3.8															
400																										
401	Thermal Feedrate		MMBtu/hr		87.2		86.8		87.2		87															
402																										
403	Feedrate MTEC Calculations																									
404	Ash		mg/dscm	nd	8.3	nd	8.7	nd	8.1		8.4															
405	Chlorine		ug/dscm	nd	19	nd	20	nd	19		10															
406	Antimony		ug/dscm	nd	19	nd	20	nd	19		10															
407	Arsenic		ug/dscm	nd	6	nd	6	nd	6		3															
408	Barium		ug/dscm	nd	6	nd	6	nd	6		3															
409	Beryllium		ug/dscm	nd	6	nd	6	nd	6		3															
410	Cadmium		ug/dscm	nd	4	nd	4	nd	4		2															
411	Chromium		ug/dscm	nd	23		30		22		25															
412	Lead		ug/dscm	nd	19	nd	20	nd	19		10															
413	Mercury		ug/dscm	nd	1	nd	1	nd	1		0															
414	Silver		ug/dscm	nd	8	nd	8	nd	8		4															
415	Thallium		ug/dscm	nd	19	nd	20	nd	19		10															
416	SVM		ug/dscm		12		12		11		12															
417	LVM		ug/dscm		35		43		35		38															
418																										
419																										
420																										

	B	AB	AC	AD	AE	AF	AG	AH	AI	AJ
361	Chlorine	2707.9								
362	Antimony	8.4								
363	Arsenic	8.4								
364	Barium	2.6								
365	Beryllium	2.6								
366	Cadmium	1.7								
367	Chromium	8.4								
368	Lead	8.4								
369	Mercury	0.3								
370	Silver	3.4								
371	Thallium	8.4								
372	SVM	10.2								
373	LVM	19.5								
374										
375										
376	911C11									
377										
378										
379	Feedstream Number									
380	Feed Class									
381	Feed Class 2									
382	Feedstream Description									
383	Feed Rate									
384	Heating Value									
385	Ash									
386	Chlorine									
387	Antimony									
388	Arsenic									
389	Barium									
390	Beryllium									
391	Cadmium									
392	Chromium									
393	Lead									
394	Mercury									
395	Silver									
396	Thallium									
397										
398	Stack Gas Flowrate									
399	Oxygen									
400										
401	Thermal Feedrate	162								
402										
403	Feedrate MTEC Calculatic									
404	Ash	8.4								
405	Chlorine									
406	Antimony	9.7								
407	Arsenic	9.7								
408	Barium	3.5								
409	Beryllium	2.9								
410	Cadmium	1.9								
411	Chromium	25.1								
412	Lead	9.7								
413	Mercury	0.4								
414	Silver	3.9								
415	Thallium	9.7								
416	SVM	11.6								
417	LVM	37.7								
418										
419										
420	911C12									

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
421					R1		R2	R3			Cond Avg		R1				R3		Cond Avg	R1				R3	
422	Feedstream Number				F1	F1	F1	F1	F1	F1	F1	F1	F2	F2	F2	F2	F2	F2	F2	F2	F3	F3	F3	F3	
424	Feed Class				Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	NG	NG	NG	NG	NG	NG	NG	NG	Total	Total	Total	Total	
425	Feed Class 2				HW	HW	HW	HW	HW	HW	HW	HW	MF	MF	MF	MF	MF	MF	MF	MF	Total	Total	Total	Total	
426	Feedstream Description				HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Total	Total	Total	Total		
427	Feed Rate				5580	5586	5598	5598	5588	5588	5588	5588	5599.5	5599.5	5599.5	5599.5	5599.5	5599.5	5599.5	5599.5	Total	Total	Total	Total	
428	Heating Value				15620	15620	15620	15620	15620	15620	15620	15620	15620	15620	15620	15620	15620	15620	15620	15620	Total	Total	Total	Total	
429	Ash				3810	3538	3266	3266	3538	3538	3538	3538	3402	3402	3402	3402	3402	3402	3402	3402	Total	Total	Total	Total	
430																									
431	Ash			y	57	91	99	99	82	82	82	82	82	82	82	82	82	82	82	82	57	57	91	99	
432																									
433	Stack Gas Flowrate	E1			31121	31779	33461	33461	32120	32120	32120	32120	32120	32120	32120	32120	32120	32120	32120	32120					
434	Oxygen				3.3	2.9	3.7	3.7	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3					
435																									
436	Thermal Feedrate				87.2	87.3	87.4	87.4	87	87	87	87	67.8	67.8	67.8	67.8	67.8	67.8	67.8	67.8	155.0	155.0	155.2	154.9	
437																									
438																									
439	911C13																								
440					R1	R2	R3	R3	R4	R4	R4	Cond Avg	Cond Avg	R1	R2	R2	R2	R2	R3	R3	R4	R4	Cond Avg	R1	
442	Feedstream Number				F1	F1	F1	F1	F1	F1	F1	F1	F1	F2	F2	F2	F2	F2	F2	F2	F2	F2	F2	F3	
443	Feed Class				Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	F3	
444	Feed Class 2				HW	HW	HW	HW	HW	HW	HW	HW	HW	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	Total	
445	Feedstream Description				HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	HHC waste	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Total	Total	
446	Feed Rate				5610	5604	5604	5604	5580	5580	5580	5580	5599.5	5599.5	5599.5	5599.5	5599.5	5599.5	5599.5	5599.5	Total	Total	Total	Total	
447	Heating Value				15620	15620	15620	15620	15620	15620	15620	15620	15620	15620	15620	15620	15620	15620	15620	15620	Total	Total	Total	Total	
448	Ash				3810	3810	3810	3810	2177	2177	2177	2177	3402	3402	3402	3402	3402	3402	3402	3402	Total	Total	Total	Total	
449																									
450	Ash			y	55.7	58.3	55.9	55.9	31.8	31.8	31.8	50	50	50	50	50	50	50	50	50				55.7	
451																									
452	Stack Gas Flowrate				20458	21582	19498	19498	20513	20513	20513	20513	20513	20513	20513	20513	20513	20513	20513	20513					
453	Oxygen				6.9	5.3	10.1	10.1	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4					
454																									
455	Thermal Feedrate				87.6	87.5	87.5	87.5	87.2	87.2	87.2	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	1.7	1.7	1.4	1.3	
456																									
457																									
458																									
459																									
460	BIF Feedrate Limits				Units No. 911 and 912 separately																				
461	Adjusted Tier 1				LHC Feed for 911																				
462	Ash																								
463	Chlorine								2060	2060	2060	2060	2060	2060	2060	2060	2060	2060	2060	2060	2060	2060	2060	2060	
464	Arsenic								1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	
465	Beryllium								0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	
466	Cadmium								0.438	0.438	0.438	0.438	0.438	0.438	0.438	0.438	0.438	0.438	0.438	0.438	0.438	0.438	0.438	0.438	
467	Chromium								0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	
468	Antimony								2350	2350	2350	2350	2350	2350	2350	2350	2350	2350	2350	2350	2350	2350	2350	2350	
469	Barium								391000	391000	391000	391000	391000	391000	391000	391000	391000	391000	391000	391000	391000	391000	391000	391000	
470	Lead								704	704	704	704	704	704	704	704	704	704	704	704	704	704	704	704	
471	Mercury								626	626	626	626	626	626	626	626	626	626	626	626	626	626	626	626	
472	Silver								23500	23500	23500	23500	23500	23500	23500	23500	23500	23500	23500	23500	23500	23500	23500	23500	
473	Thallium								2350	2350	2350	2350	2350	2350	2350	2350	2350	2350	2350	2350	2350	2350	2350	2350	
474																									
475																									
476	BIF Feedrate Limits				Units No. 911 and 912 separately																				
477	Adjusted Tier 1				HHC Feed for 911																				
478	Ash								8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	
479	Chlorine								3130	3130	3130	3130	3130	3130	3130	3130	3130	3130	3130	3130	3130	3130	3130	3130	
480																									

	B	AB	AC	AD	AE	AF	AG	AH	AI	AJ
421		Cond Avg								
422	Feedstream Number									
423	F3									
424	Feed Class									
425	Feed Class 2									
426	Feedstream Description									
427	Feed Rate									
428	Heating Value									
429	Ash									
430										
431	Ash	82								
432										
433	Stack Gas Flowrate									
434	Oxygen									
435										
436	Thermal Feedrate	155.0								
437										
438										
439	911C13									
440		R2		R3	R4					Cond Avg
441										
442	Feedstream Number									
443	F3									
444	Feed Class									
445	Feed Class 2									
446	Feedstream Description									
447	Feed Rate									
448	Heating Value									
449	Ash									
450										
451	Ash	58.3		55.9		31.8				50.4
452	Stack Gas Flowrate									
453	Oxygen									
454										
455	Thermal Feedrate	87.7		89.2		88.6				88.7
456										
457										
458										
459										
460	BIF Feedrate Limits									
461										
462	Ash									
463	Chlorine									
464	Arsenic									
465	Beryllium									
466	Cadmium									
467	Chromium									
468	Antimony									
469	Barium									
470	Lead									
471	Mercury									
472	Silver									
473	Thallium									
474										
475										
476										
477	BIF Feedrate Limits									
478										
479	Ash									
480	Chlorine									

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	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	
481	Arsenic		g/hr									4.32															
482	Beryllium		g/hr									1.18															
483	Cadmium		g/hr									1.31															
484	Chromium		g/hr									21.9															
485	Antimony		g/hr									2350															
486	Barium		g/hr									391000															
487	Lead		g/hr									704															
488	Mercury		g/hr									626															
489	Silver		g/hr									23500															
490	Thallium		g/hr									2350															

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	B	AB	AC	AD	AE	AF	AG	AH	AI	AJ
481	Arsenic									
482	Beryllium									
483	Cadmium									
484	Chromium									
485	Antimony									
486	Barium									
487	Lead									
488	Mercury									
489	Silver									
490	Thallium									

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	PCDD/PCDF																
2	N																
3	Facility Name and ID:	Aristech, 2001 UB															
4	Condition ID:	911C13															
5	Condition/Test Date:	Trial burn, Nov 15-16, 2001															
6																	
7		I-TEF															
8		Wght Fact															
9			Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total
10		Detected in sample volume (pg)	Full ND	1/2 ND	Full ND	1/2 ND	Full ND	1/2 ND	Full ND	1/2 ND	Full ND	1/2 ND	Full ND	1/2 ND	Full ND	1/2 ND	Full ND
11	2,3,7,8-TCDD	1	19.1	9.55	19.10	9.55	32.8	16.39	32.8	16.39	32.8	16.39	32.8	16.39	15	7	7
12	Total TCDD	0	94.0	47	0	0	466.6	233	0.0	233	0.0	233	0.0	233	0	74	0
13	1,2,3,7,8-PCDD	0.5	11.6	5.78	5.78	2.89	34.0	16.98	17.0	16.98	17.0	16.98	17.0	16.98	12	12	6
14	Total PCDD	0	74.7	37	0	0	34.0	17	0.0	17	0.0	17	0.0	17	0	48	0
15	1,2,3,4,7,8-HxCDD	0.1	21.0	10.48	2.10	1.05	28.1	14.05	2.8	14.05	2.8	14.05	2.8	14.05	3	16	2
16	1,2,3,6,7,8-HxCDD	0.1	19.6	9.81	1.96	0.98	29.9	14.93	3.0	14.93	3.0	14.93	3.0	14.93	3	15	2
17	1,2,3,7,8,9-HxCDD	0.1	18.4	9.20	1.84	0.92	26.5	13.27	2.7	13.27	2.7	13.27	2.7	13.27	3	14	1
18	Total HxCDD	0	112.2	56	0	0	312.6	156	0.0	156	0.0	156	0.0	156	0	14	0
19	1,2,3,4,6,7,8-HpCDD	0.01	76.4	38.21	0.76	0.38	97.0	48.51	1.0	48.51	1.0	48.51	1.0	48.51	0	13	0
20	Total HpCDD	0	147.1	74	0	0	187.9	94	0.0	94	0.0	94	0.0	94	0	13	0
21	OCDD	0.001	140.0	70.00	0.14	0.07	71.5	36	0.1	36	0.1	36	0.1	36	0	19	0
22	2,3,7,8-TCDF	0.1	23.3	11.65	2.33	1.16	18.1	9	1.8	9	1.8	9	1.8	9	1	4	0
23	Total TCDF	0	428.3	214	0	0	422.2	211	0.0	211	0.0	211	0.0	211	0	86	0
24	1,2,3,7,8-PCDF	0.05	21.0	11	1	1	19.7	10	1.0	10	1.0	10	1.0	10	1	8	0
25	2,3,4,7,8-PCDF	0.5	25.8	13	13	6	23.5	12	11.8	12	11.8	12	11.8	12	7	7	4
26	Total PCDF	0	148.4	74	0	0	145.3	73	0.0	73	0.0	73	0.0	73	0	8	0
27	1,2,3,4,7,8-HxCDF	0.1	25.3	13	3	1	22.1	11	2.2	11	2.2	11	2.2	11	1	5	1
28	1,2,3,6,7,8-HxCDF	0.1	23.2	12	2	1	19.0	10	1.9	10	1.9	10	1.9	10	1	4	0
29	2,3,4,6,7,8-HxCDF	0.1	26.2	13	3	1	27.0	13	2.7	13	2.7	13	2.7	13	1	5	1
30	1,2,3,7,8,9-HxCDF	0.1	13.5	7	1	1	11.3	6	1.1	6	1.1	6	1.1	6	1	6	1
31	Total HxCDF	0	137.9	69	0	0	124.4	62	0.0	62	0.0	62	0.0	62	0	5	0
32	1,2,3,4,6,7,8-HpCDF	0.01	59.7	30	1	0	57.9	29	0.6	29	0.6	29	0.6	29	0	7	0
33	1,2,3,4,7,8,9-HpCDF	0.01	19.9	10	0	0	19.0	9	0.2	9	0.2	9	0.2	9	0	6	0
34	Total HpCDF	0	107.1	54	0	0	90.9	45	0.0	45	0.0	45	0.0	45	0	7	0
35	OCDF	0.001	59.6	30	0	0	71.5	72	0.1	72	0.1	72	0.1	72	0	17	0
36																	
37	Gas sample volume (dscf)		83.69	83.69	83.69	83.69	111.12	111.12	111.12	111.12	111.12	111.12	111.12	111.12	28.234	28.234	28.234
38	O2 (%)		6.90	6.90	6.90	6.90	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	10.1	10.1	10.1
39																	
40	PCDD/PCDF (ng in sample)		0.058	0.7	0.058	0.029	0.083	1.0	0.083	1.0	0.083	1.0	0.083	1.0	0.0496	0.3	0.0248
41	PCDD/PCDF (ng/dscm @ 7% O2, 100		0.024	0.304	0.024	0.012	0.02	0.28	0.02	0.28	0.02	0.28	0.02	0.28	0.08	0.47	0.04
42																	
43	TEQ Cond Avg		0.0212														
44	Total Cond Avg		0.3523														
45																	
46	NOTE: sample gas volumes were inferred from using reported O2 and TEQ concentrations at 7% O2.																