

US EPA ARCHIVE DOCUMENT

1	2	3
1	Source Description	
2		
3	Phase I ID No.	3036
4	EPA ID No.	NCD047373766
5	Facility Name	DSM Pharmaceuticals
6	Facility Location	
7	City	Greenville
8	State	NC
9	Unit ID Name/No.	NAO Incinerator
10	Other Sister Facilities	
11	Number of Sister Facilities	0
12	Combustor Class	Onsite Incinerator ?
13	Combustor Type	Liquid Injection?
14	Combustor Characteristics	
15	Capacity (MMBtu/hr)	
16	Soot Blowing	
17	APCS Detailed Acronym	
18	APCS General Class	
19	APCS Characteristics	
20	Hazardous Wastes	Liq
21	Haz Waste Description	
22	Supplemental Fuel	Natural Gas
23		
24	Stack Characteristics	
25	Diameter (ft)	0.83
26	Height (ft)	
27	Gas Velocity (ft/sec)	164.5
28	Gas Temperature (°F)	1839
29		
30	Permitting Status	
31	HWC Burn Status (Date if Terminated)	

	2	3
1	Condition Description	
2		
3	3036C10	
4		
5	Report Name/Date	Stationary Source Sampling Report, Ref No. 6363-B, Burroghs Wellcome Co. Greenville, NC, Hazardous Waste Incineration Testing, NAO Incinerator Stack, July 19, 20, 21, 1989
6	Report Prepare	Entropy
7	Testing Firm	Entropy
8	Cond Descr	Trial Burn, incinerator temperature of 1850 °F
9	Testing Dates	July 19-21, 1989
10	Cond Dates	Jul-89
11	Content	PM, CO, HCl, POHC DRE
12		
13	3036C11	
14		
15	Report Name/Date	Stationary Source Sampling Report, Ref No. 6363-B, Burroghs Wellcome Co. Greenville, NC, Hazardous Waste Incineration Testing, NAO Incinerator Stack, July 19, 20, 21, 1989
16	Report Prepare	Entropy
17	Testing Firm	Entropy
18	Cond Descr	Trial Burn, incinerator temperature of 1950 °F
19	Testing Dates	July 19-21, 1989
20	Cond Dates	Jul-89
21	Content	PM, CO, HCl, POHC DRE

	2	3	4	5	6	7	8	9	10	11	12	13
1	Stack Gas Emissions 1											
2												
3												
4	3036C10					R1	R3	R4	Cond Avg			
5												
6	PM	E1	gr/dscf	y		0.0515		0.0417		0.0361		0.0431
7	CO (RA)	E1	ppmv	n		0.5		0.6		0.5		0.5
8	CO (RA)	E1	ppmv	y		0.8		0.9		0.8		0.8
9	HCl	E1	ppmv	n		581.0		564.0		573.0		572.7
10	HCl	E1	ppmv	y		956.9		877.3		872.0		902.1
11	Total Chlorine	E1	ppmv	y								
12												
13	Sampling Train	PM/HCl	E1									
14	Stack Gas Flowrate		dscfm			1047.0		1117.0		1085.0		1083.0
15	O2		%			12.5		12.0		11.8		12.1
16	Moisture		%			13.4		11.9		12.0		12.4
17	Temperature		°F			1819.0		1849.0		1850.0		1839.3
18												
19												
20	POHC DRE											
21	Chlorobenzene	E1	%	>		99.998 >		99.9994 >		99.99998		
22	Chloroform	E1	%	>		99.9991 >		99.9994 >		99.9997		
23	Toluene	E1	%	>		99.9994		99.9995		99.9998		
24												
25												
26	3036C11					R1	R2	R3	Cond Avg			
27												
28	PM	E1	gr/dscf	y		0.0474		0.0493		0.0324		0.0430
29	CO (RA)	E1	ppmv	n		0.4		0.8		0.5		0.6
30	CO (RA)	E1	ppmv	y		0.6		1.2		0.7		0.8
31	HCl	E1	ppmv	n		556.0		576.0		566.0		566.0
32	HCl	E1	ppmv	y		828.1		840.0		825.4		831.2
33	Total Chlorine	E1	ppmv	y								
34												
35	Sampling Train	PM/HCl	E1									
36	Stack Gas Flowrate		dscfm			1067.0		1053.0		1045.0		1055.0
37	O2		%			11.6		11.4		11.4		11.5
38	Moisture		%			12.6		13.1		13.1		12.9
39	Temperature		°F			1927.0		1922.0		1927.0		1925.3
40												
41												
42	POHC DRE											
43	Chlorobenzene	E1	%	>		99.99991 >		99.99995 >		99.9996		
44	Chloroform	E1	%	>		99.998 >		99.9996 >		99.998		
45	Toluene	E1	%	>		99.9997 >		99.99993 >		99.9994		

	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28				
1	Feedstream 1																														
2																															
3																															
4	3036C10				R1		R3		R4		Cond Avg		R1		R2		R3		Cond Avg		R1		R3		R4		Cond Avg				
5																															
6	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2		F3		F3		F3		F3				
7	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		NG		NG		NG		NG		Total		Total		Total		Total				
8	Feed Class 2				HW		HW		HW		HW										Total		Total		Total		Total				
9	Feedstream Description																														
10	Feedrate		lb/hr		299.52		300.39		300.86																						
11	Feedrate		acfh										202		179		329														
12	Specific Gravity				0.8618		0.8568		0.8603																						
13	Heating value		Btu/lb		9118		9261		9351																						
14	Ash		wt %		0.072		0.057		0.068																						
15	Chloride		wt %		0.878		0.784		0.764																						
16	Antimony		ug/mL	nd	0.005	nd	0.005	nd	0.005																						
17	Arsenic		ug/mL	nd	0.005	nd	0.005	nd	0.005																						
18	Barium		ug/mL	nd	0.2	nd	0.2	nd	0.2																						
19	Beryllium		ug/mL	nd	0.05	nd	0.05	nd	0.05																						
20	Cadmium		ug/mL	nd	0.05	nd	0.05	nd	0.05																						
21	Chromium		ug/mL	nd	0.1	nd	0.1	nd	0.1																						
22	Chromium +6		ug/mL	nd	0.1	nd	0.1	nd	0.1																						
23	Lead		ug/mL	nd	0.1	nd	0.1	nd	0.1																						
24	Mercury		ug/mL	nd	0.003	nd	0.003	nd	0.003																						
25	Silver		ug/mL	nd	0.05	nd	0.05	nd	0.05																						
26	Thallium		ug/mL	nd	0.1	nd	0.1	nd	0.1																						
27																															
28	Gas flowrate		dscfm		1047		1117		1085																						
29	Oxygen		%		12.5		12.0		11.8																						
30																															
31	Thermal Feedrate		MMBtu/hr		2.73		2.78		2.81		2.8		0.202		0.179		0.329		0.2												
32	Estimated Firing Rate		MMBtu/hr		2.83		3.19		3.17		3.1																				
33																															
34	Feedrate MTEC																														
35	Ash		mg/dscm		90.7		63.8		76.7		77.1											90.7		63.8		76.7		77.05998			
36	Chlorine		ug/dscm		1106117		876904		861959		948326.5											1106116.7		876904.0		861959		948326			
37	Antimony		ug/dscm	100	0.73	100	0.65	100	0.66	100	0.7											100	1	100	1	100	1	100	1	100	1
38	Arsenic		ug/dscm	100	0.73	100	0.65	100	0.66	100	0.7											100	0.73	100	0.65	100	0.66	100	0.68		
39	Barium		ug/dscm	100	29.24	100	26.11	100	26.23	100	27.2											100	29.24	100	26.11	100	26.23	100	27.19		
40	Beryllium		ug/dscm	100	7.31	100	6.53	100	6.56	100	6.8											100	7.31	100	6.53	100	6.56	100	6.80		
41	Cadmium		ug/dscm	100	7.31	100	6.53	100	6.56	100	6.8											100	7.31	100	6.53	100	6.56	100	6.80		
42	Chromium		ug/dscm	100	14.62	100	13.05	100	13.11	100	13.6											100	14.62	100	13.05	100	13.11	100	13.60		
43	Chromium +6		ug/dscm	100	14.62	100	13.05	100	13.11	100	13.6											100	14.62	100	13.05	100	13.11	100	13.60		
44	Lead		ug/dscm	100	14.62	100	13.05	100	13.11	100	13.6											100	14.62	100	13.05	100	13.11	100	13.60		
45	Mercury		ug/dscm	100	0.44	100	0.39	100	0.39	100	0.4											100	0.44	100	0.39	100	0.39	100	0.41		
46	Silver		ug/dscm	100	7.31	100	6.53	100	6.56	100	6.8											100	7.31	100	6.53	100	6.56	100	6.80		
47	Thallium		ug/dscm	100	14.62	100	13.05	100	13.11	100	13.6											100	14.62	100	13.05	100	13.11	100	13.60		
48																															
49	SVM		ug/dscm	100	21.93	100	19.58	100	19.67	100	20.4											100	21.93	100	19.58	100	19.67	100	20.39		
50	LVM		ug/dscm	100	22.66	100	20.23	100	20.33	100	21.1											100	22.66	100	20.23	100	20.33	100	21.07		
51																															
52																															
53																															
54	3036C11				R1		R3		R4		Cond Avg		R1		R2		R3		Cond Avg		R1		R3		R4		Cond Avg				
55																															
56	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2		F3		F3		F3		F3				
57	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		NG		NG		NG		NG		Total		Total		Total		Total				
58	Feed Class 2				HW		HW		HW		HW										Total		Total		Total		Total				
59	Feedstream Description																														
60	Feedrate		lb/hr		299.45		300.06		299.51																						

	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28		
61	Feedrate		acfh										367		343			346											
62	Specific Gravity				0.8616		0.8606		0.8593																				
63	Heating value		Btu/lb		9163		9378		9231																				
64	Ash		wt %		0.057		0.063		0.061																				
65	Chloride		wt %		0.775		0.676		0.777																				
66	Antimony		ug/mL	nd	0.005	nd	0.005	nd	0.005																				
67	Arsenic		ug/mL	nd	0.005	nd	0.005	nd	0.005																				
68	Barium		ug/mL	nd	0.2	nd	0.2	nd	0.2																				
69	Beryllium		ug/mL	nd	0.05	nd	0.05	nd	0.05																				
70	Cadmium		ug/mL	nd	0.05	nd	0.05	nd	0.05																				
71	Chromium		ug/mL	nd	0.1	nd	0.1	nd	0.1																				
72	Chromium +6		ug/mL	nd	0.1	nd	0.1	nd	0.1																				
73	Lead		ug/mL	nd	0.1	nd	0.1	nd	0.1																				
74	Mercury		ug/mL	nd	0.003	nd	0.003	nd	0.003																				
75	Silver		ug/mL	nd	0.05	nd	0.05	nd	0.05																				
76	Thallium		ug/mL	nd	0.1	nd	0.1	nd	0.1																				
77																													
78	Gas flowrate		dscfm		1067		1053		1045																				
79	Oxygen		%		11.6		11.4		11.4																				
80																													
81	Thermal Feedrate		MMBtu/hr		2.74		2.81		2.76		2.8		0.367		0.343		0.346		0.4										
82	Estimated Firing Rate		MMBtu/hr		3.18		3.21		3.18		3.2																		
83																													
84	Feedrate MTEC																												
85	Ash		mg/dscm		63.7		70.0		68.2		67.3										63.7		70.0		68.2		67.3		
86	Chlorine		ug/dscm		866124		751106		868342		828524.2										866123.8		751106.3		868342		828524		
87	Antimony		ug/dscm	100	0.649	100	0.646	100	0.650	100	0.6										100	1	100	1	100	1	100	1	
88	Arsenic		ug/dscm	100	0.649	100	0.646	100	0.650	100	0.6										100	0.65	100	0.65	100	0.65	100	0.65	
89	Barium		ug/dscm	100	25.942	100	25.822	100	26.011	100	25.9										100	25.94	100	25.82	100	26.01	100	25.92	
90	Beryllium		ug/dscm	100	6.485	100	6.455	100	6.503	100	6.5										100	6.49	100	6.46	100	6.50	100	6.48	
91	Cadmium		ug/dscm	100	6.485	100	6.455	100	6.503	100	6.5										100	6.49	100	6.46	100	6.50	100	6.48	
92	Chromium		ug/dscm	100	12.971	100	12.911	100	13.005	100	13.0										100	12.97	100	12.91	100	13.01	100	12.96	
93	Chromium +6		ug/dscm	100	12.971	100	12.911	100	13.005	100	13.0										100	12.97	100	12.91	100	13.01	100	12.96	
94	Lead		ug/dscm	100	12.971	100	12.911	100	13.005	100	13.0										100	12.97	100	12.91	100	13.01	100	12.96	
95	Mercury		ug/dscm	100	0.389	100	0.387	100	0.390	100	0.4										100	0.39	100	0.39	100	0.39	100	0.39	
96	Silver		ug/dscm	100	6.485	100	6.455	100	6.503	100	6.5										100	6.49	100	6.46	100	6.50	100	6.48	
97	Thallium		ug/dscm	100	12.971	100	12.911	100	13.005	100	13.0										100	12.97	100	12.91	100	13.01	100	12.96	
98																													
99	SVM		ug/dscm	100	19.456	100	19.366	100	19.508	100	19.4										100	19.46	100	19.37	100	19.51	100	19.44	
100	LVM		ug/dscm	100	20.105	100	20.012	100	20.158	100	20.1										100	20.11	100	20.01	100	20.16	100	20.09	

	3	4	5	6	7
1	Process Information 1				
2					
3	3036C10		R1	R2	R3
4	Chamber Temp	°F	1849	1849	1849
5					
6					
7	3036C10		R1	R2	R3
8	Chamber Temp	°F	1949	1949	1949