

May 19, 2006

New Hampshire Division of Environmental Services Air Resources Division 6 hazen Dr Concord, NH 03302 Mr. Regulator

Dear Mr. Regulator:

Recently we requested from your Department NOx and CO emission regulation information pertaining to natural gas and oil fired boiler systems. I thank you for helping us by providing this information as it will allow us to compare regulations in different parts of the country.

EPA ozone non-attainment designations are having a significant impact both on industry and on regulatory agencies such as yours. Many non-attainment areas are scrambling to determine the best available options to include in their State Implementation Plan. Here is where I think we may be able to help you.

Cleaver-Brooks is the largest producer of hot water and steam boilers in the US. We have spent the past five years developing a state of the art burner and boiler packages that produces less than 9 ppm NOx when firing natural gas and less than 70 ppm NOx when firing distillate oil. This includes a full U.L. labeled certification test program for our Model CB 100 to 800 HP 4-pass firetube boiler series. We currently have over (20) third-party test reports which document compliance to these limits. In addition, we offer burners and burner retrofit kits for higher levels such as <12, <15 and <30 ppm NOx on natural gas. In the past three years we have sold hundreds of these units.

Therefore your NOx, and hence ozone, ambient concentrations can be reduced by simply tightening up your current regulations. This in itself may be enough to eliminate a non-attainment designation.

This equipment is available today and is very cost competitive, as evidenced by the number of units shipped and installed.

Finally, the San Joaquin area air district in CA took this approach about two years ago and reduced their limits to <9 ppm NOx for boilers over 20 MM BTH and <15 ppm NOx for boilers between 2 MM BTH and <20 MM BTH. They mandated that 25% of the boiler population was required to comply with these new regulations each year. They are currently in year two of this program with over (50) units completed and ozone reductions have occurred.

I would be happy to meet with you to discuss this option in detail. Feel free to call me at 414/438-5460 if you have any questions. I have enclosed some brochures on this equipment for your review. Sincerely,

Daniel J. Willems, VP, Product Development

Willems

AIR RESOURCES DIVISION

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Enclosures

		Date	Fuel	NOx	NOx	CO	Flowrate	
	15-15-15-15-15-15-15-15-15-15-15-15-15-1	Tested	Type	(ppm @ 3% O2)	(Ib/MM BTU)	(ppm @ 3% O2)	(dscfm)	Type/Size
	< 9 ppm NOx	require						
1	Dart Container	5/27/05	NG	6.5	0.0079	0	3592	29.3 MM BTH Cleaver-Brooks NTI retrofit
			NG	6.5	0.0079	0	3872	
			NG	6.8	0.0082	0	3365	
			44		0.000	7 =		DO O LUI DELL
2	San Joaquin General	5/18/05	NG	7.4	0.009	1.5	1941	20.9 MM BTH Cleaver-Brooks CEW retrofit
			NG	6.9	0.0084	8.5	2213	
			NG	8	0,0097	0.2	1717	
	(2)			•		35		
3	San Joaquin General	8/11/05	NG	6.6	0.008	0	3063	20.9 MM BTH Cleaver-Brooks, unit #2
			NG	6.8	0.0083	0	2376	
			NG	7	0.0085	0	2767	
	3 T T T T T			22.46			4	
4	San Joaquin General	8/11/05	NG	8.3	0.0101	0	2045	20.9 MM BTH Cleaver-Brooks, unit #1
			NG	.7	0.0085	0	3611	
			NG	6.7	0.0082	0	3750	
		104						
5	Kraft General Foods	5/23/05	NG	4.4	0.0053	0	767	33.8 MM BTH IC NTD336 retrofit
			NG	4.8	0.0059	<u> </u>	749	
			NG	5	0.0061	0	753	
_		F/04/05	110	/	0.0050	4.0	4500	00.0144.0711
6	Delano Growers Grape Products	5/31/05	NG	4.7	0.0058	1.3	1529	33.8 MM BTH Cleaver-Brooks NTI retrofit
			NG	4.7	0.0057	1	1542	
2007			NG	4.4	0.0053	1.4	1524	
					14. A.			
7	CDI	8/20/03	NG	8.2	0.01	2.3		61 MM BTH Natcom
			NG	8.3	0.01	3	4500	
			NG	7.9	0.0096	2.4	4269	
	,							
8	SK Foods	10/20/03	NG	5.4	0.0065	0		89.1 MM BTH Natcom
1			NG	5.3	0.0065	0	7618	
			NG	5.5	0.0067	0	7679	A CONTRACTOR OF THE CONTRACTOR
I	and the second	1997 199				.		

	Santain statement of the contract of the contr			110	I No.	co	Flowrate	
		Date	Fuel	NOx	NOx			T. ma/Class
		Tested	Type			(ppm @ 3% O2)		Type/Size
9	Recot Inc (Frito-	5/22/05	NG	7.7	0.0094	10	2771	72 MM BTH
	Lay)				0.0100			Natcom
		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	NG	8.4	0.0102	8.3	3605	e de constitue en communication de constitue
			NG	8.2	0.01	11.6	3625	
				44		170	1000	
10	Boeing - LB,	3/25/04	NG	7.6		<10	4006	33.8 MM BTH
	CA			Ministration				Cleaver-Brooks
								CEW retrofit
			- 1.					
11	Kraft Foods,	6/14/05	NG	8.4	0.0102	0	1955	14.7 MM BTH
	Inc.			The Administration of				Cleaver-Brooks
			<u></u>				wastidistribusion to the second	CEW retrofit
			NG	7.5	0.0091	0	1393	
			NG	7.6	0.0092	0	1642	
	4		1000	45				
12	William	6/24/05	NG	7.7	0.0094	0	3787	24.5 MM BTH
	Bolthouse		vedevelinesejős		obelia con	doment		Cleaver-Brooks NTI
	Farms	gannaganda			***************************************			retrofit
			NG	7.5	0.0091	0	3386	
			NG	7.6	0.0092	0	3345	
				in the	2.00	<del>. 2</del> 2		
13	Unilever Best	5/11/05	NG	9.1	0.011	1.2	3818	85 MM BTH
	Foods	····				AND THE CONTRACT OF THE CONTRA		Natcom on B&W
		***************************************	NG	8.5	0.0103	1.3	4512	
			NG	8.4	0.0103	1.3	2298	
14	Unilever Best	7/21/04	NG	8.1	0.0098	1.6	5859	38 MM BTH
-	Foods			and the second s				Natcom on
***************************************						1		Nebraska Boiler
			NG	8	0.0097	1.9	5832	
			NG	7.8	0.0095	1.9	5831	
į			10.4					
15	SJ Delta	11/17/05	NG	7.9	0.0096	0	1430	20.9 MM BTH
I	College	200			<del>Ol</del> ogorous as			Cleaver-Brooks
	<u> </u>			- competent and the state of th				retrofit, unit #3
			NG	8.3	0.01	0	1006	***************************************
-		NI 7 20 2 5 200 200 200 5 200 EL 200 200 200	NG	8.2	0.01	0	822	298723 546 55544 5 557 4 5 5 5 5 5 5 5 5 5 5 5 5 5
					4.44	487.2		
3		11/17/05	NG	6.2	0.0075	0	3	20.9 MM BTH
7	College				- I		3	Cleaver-Brooks
								retrofit, unit #2
			NG NG	7,5	0.0093	0	2379	
			NG	7.3	0.0089	2.8	797	
				<b>—</b>			A1.	
	Morningstar	6/14/05	NG	7.16	0.0092	2.47	1	26.8 MM BTH
The state of the s	West	900		A CONTRACTOR OF THE CONTRACTOR	in the same of the			Burham Boiler
				7/4		3 ~~		retrofit
aradan.		***************************************	NG NG	7.21	0.0092	1.65	170	***************************************
			ING P	6.89	8800.0	1.07	242	
				26 2 20 21 12 2 3 AFE				

		T	7	1.0			yer y	-
		Date	Fuel	NOx	NOx	CO	Flowrate	
		Tested	Type	(ppm @ 3% O2)	(Ib/MM BTU)	(ppm @ 3% O2)	(dscfm)	Type/Size
18	Nestle Food	10/12/05	NG	5.7	0.0069	1.3	4783	29.4 MM BTH Hurst retrofit
			NG	5.8	0.0070	0.1	4592	
	**************************************		NG	5.9	0.0072	0	4550	
19	Hilmar Cheese	11/18/05	NG	7	0.0072	2.2	4977	50.2 MM BTH Cleaver-Brooks
		***************************************	NG	7.3	0.0072	2.2	4713	
	***************************************	······································	NG	7.4	0.0072	2.2	4431	
				487.13	2.00	2.12		
20	Gilroy Foods	8/29/05	NG	7.6	0.0092	10.1	3970	63 MM BTH Cleaver-Brooks
			NG	7.8	0.0095	0	4745	
		, , , , , , , , , , , , , , , , , , ,	NG	8.3	0.0101	0	4663	A CONTRACTOR OF THE PROPERTY O
	(1987) St. 1987							
21	Associated Feed	8/31/05	NG	7.7	0.0093	1.4	417	19.4 MM BTH Hurst Boiler retrofit
			NG	7.5	0.0091	0.6	1610	
		***************************************	NG	7.9	0.0095	0	1595	
			100	TALKET .				
22	Patton State Hospital	12/20/02	NG	6.8	0.0087	13	1053	12.2 MM BTH Cleaver-Brooks
		***************************************	NG	9.5	0.0121	0	2184	
		Audici Lanc Ca Parini Monte colores de constitución de la colores de la	NG	6.4	0.0082	0	3361	***************************************
	MARKET C							75.50
23	Los Gatos Tomato Products	09/26/05	NG	7	0.0089	3.3		184 MM BTH B&W retrofit
1		ice#dayce;in; #049001ger;inc####################################	NG	7.6	0.0097	3.5	27484	
ı			NG	8.2	0.0105	3.4	27250	
ı				200				
	Inland Paperboard	12/01/05	NG	8.7	0.0111	0	1	20.9 MM BTH Cleaver-Brooks
I			NG	8.8	0.0113	0	2795	
Ì	***************************************		NG	8.6	0.0110	0	3404	**************************************
	THE STATE OF THE S	3 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -						# 200
		11/15/05	NG	8.3	0.0106	0.3	1	20.9 MM BTH Cleaver-Brooks
			NG	8.1	0.0104	0.1	1152	-
Ī			NG	8.2	0.0105	0	1541	
ı						7		2.75
#2			1.00			The second secon	200000000000000000000000000000000000000	

	<u></u>	Date	Fuel	NOx	NOx	CO	Flowrate	
		Tested	Type	(ppm @ 3% O2)	(Ib/MM BTU)	(ppm @ 3% O2)	(dscfm)	Type/Size
	<12 ppm N	lOx requ	ireme	nts (natural g	as)			
1		11/13/03	NG	9.8	0.0125	<1	732	16.7 MM BTH
	Cheese -							York Shipley
	Southgate,							Boiler
	CA					***************************************	***************************************	
	***************************************		NG	8.6	0.0110	<1	2084	
			NG	8.3	0.0106	<1	2752	
		40/47/00			0.0140	20	270	Z MM OTU
2	See's	12/17/02	NG	11.1	0.0142	28	376	7 MM BTH Cleaver-Brooks
	Candies							FLX
			NG	10.3	0.0132		627	
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		NG	9.9	0.0127	<1	1146	
				· · ·				4.05
3	Baxter	10/10/02	NG	8.9	0.0114	<1	1254	20.9 MM BTH
	Healthcare				1			Cleaver-Brooks
								CEW
			NG	9.8	0.0125	<1	2464	
			NG	8.9	0.0114	<1	4873	
		4						
4	Leprino	6/13/05	NG	9,9	0.012	0	2466	16.7 MM BTH
	Foods							Cleaver-Brooks
***************************************					2014111884247114111141141414141414141414141414141			retrofit
			NG	10.3	0.0125	0	2465	***************************************
		Lander C. Start Principal	NG	10.6	0.0129	0	2456	
_	Махсо	1/30/03	NG	11.1	0.0135	0	NA NA	19.9 MM BTH
0		1/30/03	NG	11.1	0.0133	٧	I	Cleaver-Brooks
	Supply				1			retrofit
l	**************************************		NG	11.6	0.0141	0	NA	3 20 1 V 7 CC
I			NG	9.6	0.0117	27.3	NA	44.64.44.04.01.01.01.01.4.01.4.01.01.01.01
I			100					
6	Boeing -	3/25/04	NG	9.2	0.0118	<10	1834	16.3 MM BTH
1	LB, CA							Cleaver-Brooks
Ī								48.0
	Boeing -	3/25/04	NG	9.8	0.0125	<10		16.3 MM BTH
l	LB, CA	The second secon						Cleaver-Brooks
			1.5	Control of the Control			K 2	

		Date	Fuel	NOx	NOx	CO	Flowrate	
				(ppm @ 3% O2)	1			Type/Size
	-15 nnm	•		ements (natu		10 1	1	
	£			10.6	0.0129	2	1436	10.2 MM BTH
1	E&J Gallo	5/19/05	NG	0.01	0,0129	2	1450	Cleaver-Brooks
	Winery		NG	9.7	0.0118	3.9	1221	Olday CI-DIOONS
			NG	8.5	0.0104	10.8	379	
				0,0	7.0.10	,	7.0	
2	Cargill -	5/26/05	NG	12.1	0.0147	0	1282	14.3 MM BTH
~	Stockton			on the state of th				Cleaver-Brooks
			NG	10.8	0.0131	0	1466	
	**************************************		NG	10.2	0.0124	0	1591	
			1,000	1,740	1865		45.50	
3	Memorial	5/5/05	NG	10.9	0.0133	0	1684	14.7 MM BTH
	Hospital			THE PROPERTY OF THE PROPERTY O				Cleaver-Brooks
	North		110	100	0.0400		1750	unit #1
			NG	10.9	0.0132 0.0131	0	1753 1499	
			NG	10.8	0.0131	U	1499	
4	Foam	5/28/05	NG	7.7	0.0094	0.6	1980	12.6 MM BTH
4	Fabricators	0/20/00	140	, , ,	0.5004	0.0	.000	Cleaver-Brooks
	7 don reacons		NG	7	0.0085	0	1277	
			NG	7.3	0.0089	0	1147	
					162			
5	Modesto	12/17/04	NG	11.8	0.0143	0	1655	12.6 MM BTH
	Junior				***************************************			Iron Fireman
	College			440				boiler
			NG	12.1	0.0147	0	1345	
	-	524	NG	11.3	0.0138	0	1609	29
	_	= /5 / 25 =		10.7	0.040	7.4	0000	40 0 1414 DTU
6	Georgia	5/31/05	NG	10.7	0.013	0.1	2203	16.3 MM BTH
	Pacific Corp							Cleaver-Brooks
			NG	10.6	0.0129	0.8	2473	
	and the state of t		NG	11.5	0.014	0.0	1811	
200			110					
7	Cargill -	8/8/05	NG	13.8	0.0168	0	1173	14.7 MM BTH
	Turlock		e e e e e e e e e e e e e e e e e e e		***************************************			Cleaver-Brooks
1			NG	13.4	0.0163	0	379	
1			NG	12.4	0.0151	0	2726	
1							40.61	
1	Associated	9/20/05	NG	15	0.0182	0		12.6 MM BTH
1	Feed		1				1	Cleaver-Brooks
1			NO	440	0.0404			unit #1
	CANADA TARA		NG NG	14.9 14.3	0.0181 0.0174	0 0	1142 1702	
1			110	14.3		U	1702	
1		CONTRACT COMPANY COMPANY	20000000000000000000000000000000000000		1		CHECKS TOURS FOR S	

		Date	Fuel	NOx	NOx	CO	Flowrate			
		<u>Tested</u>	Туре	(ppm @ 3% O2)	(Ib/MM BTU)	(ppm @ 3% O2)	(dscfm)	Type/Size		
	<15 ppm NOx requirements (natural gas)									
9	Associated Feed	7/14/05	NG	11	0.0133	0	977	12.6 MM BTH Cleaver- Brooks unit #2		
1			NG	11.4	0.0139	0	1173			
1		************	NG	11.9	0.0145	0	785			
			SPECIAL CONTRACTOR							
10	Dart Container	3/2/06	NG	11.7	0.0142	0	2804	14.7 MM BTH East Boiler		
ABORDAN.			NG	11.9	0.0144	0	2443			
			NG	12.3	0.0149	0	2421			
	2.6						1,000			
	Memorial Hospital North	1/17/06	NG	11.7	0.0143	0	2359	14.6 MM BTH Cleaver- Brooks unit #2		
i de la companya de l			NG	11.9	0.0145	0	· 2277			
			NG	11.9	0.0144	0	2241			
į										

l	······································	Date	Fuel	NOx	NOx	СО	Flowrate	
		Tested	Type	(ppm @ 3% O2)	(lb/MM BTU)	(ppm @ 3% O2)	(dscfm)	Type/Size
-	<20 ppm			ements (natu				
1	Paramount	12/22/05	NG	19.4	0.0236	0	1177	7.9 MM BTH
	Petroleum	адраманана						Rooney Boiler unit #1
ĺ	1		NG	19.9	0.0242	0	1185	
1			NG	18.2	0.0221	0	1157	
ı								Glar William
2	Paramount	12/21/05	NG	18	0.0219	23	1318	7.9 MM BTH
	Petroleum	ал ла да да да учени пред да						Rooney Boiler unit #2
1			NG	16	0.0194	15	1244	
I			NG	16.9	0.0205	9	1274	
I	100							
3	Paramount	12/21/05	NG	14.7	0.0179	0.7	2069	7.9 MM BTH
	Petroleum		AND THE PARTY OF T					Rooney Boiler unit #3
Ì			NG	15.1	0.0183	0	2166	
Ì			NG	14.3	0.0173	2.2	2092	
	and Market							

	T	Date	Fuel	l Nox	NOx	CO	Flowrate	<u> </u>
		Tested	2	(ppm @ 3% O2)	4	I .		Type/Size
	20 nnm	4	•	ments (natu		10pm (@ 0 /8 02)	14301111	<u> </u>
	1 ×			**************************************	COLUMN TO THE PARTY OF THE PART			100 LOLO 100 TO
1	Carpenter	05/20/05	NG	27	0.0328	0,3	735	6.3 MM BTH
	Company							Cleaver-Brooks
		ļ	NG	27.2	0.0331	0.3	634	
			NG	27.7	0.0337	0.3	502	
2	Lactalis USA	05/21/05	NG	11.1	0.0135	0	947	8.4 MM BTH
	Turlock							Superior Boiler
			NG	11.1	0.0135	0	1018	
			NG	11.1	0.0135	0	637	
_	F	11/10/00		2000			,	
3	Suputo	11/13/03	NG	22.7		<1	846	13.4 MM BTH
	Cheese -							Johnston Boiler
	Southgate,					***************************************		
	CA		NG	19.5		<1	1029	
			NG	18.1		<1	1275	
4	Paramount	12/21/05	NG	23.2	0.0282	46	1934	13 MM BTH
	Petroleum				in the state of th			Broach Boiler
-								unit #1
			NG	23.1	0.028	78	1874	
***************************************			NG	22.5	0.0273	104	1871	
5	Paramount	12/21/05	NG	20.9	0.0254	10.5		13 MM BTH
ı	Petroleum		***************************************				- 1	Broach Boiler
			NG	20	0.0243	15.7	1967	unit #2
l			NG	22.9	0.0248	0	2004	
I			7,40		0.02.0	7	200	
6	Paramount	12/21/05	NG	27.1	0.033	15.7	2113	13.6 MM BTH
	Petroleum					· ·	1	Kewanee Boiler
l								
			NG	26.7	0.0325	7.7	2019	
			NG	25.8	0.0313	2.4	1986	
_	-	- (1 m) 2 m		20.				
	Bunge	2/15/06	NG	20.1	0.033	0.3		25.1 MM BTH
	Foods	***************************************	accuses and		The state of the s	Manager value	***************************************	Cleaver-Brooks
The state of the s			 +	19.7	0.0305		10/4	
ľ			NG NG	19.9	0.0325 0.0313	0.3	1341 1175	
ŀ			OVI	10,5	0.0010	1.1	11/0	
L		1.	1					

		Date	Fuel	NOx	NOx	CO	Flowrate	
		Tested	<u>Type</u>	(ppm @ 3% O2)	(Ib/MM BTU)	(ppm @ 3% O2)	(dscfm)	Type/Size
	< 40 ppn	NOx I	require	ments (Amb	er oil)			
1	Patton	12/20/02	Amber oil	30.2	0.0387	<1	2583	20.9 MM BTH
-	State							Cleaver-
	Hospital -							Brooks
	boiler#3							
			Amber oil	29.8	0.0382	<1	3156	
1			Amber oil	24	0.0307	<1	4475	
1	48		40.0		1.0	超 名。		100000
2	See's	12/17/02	Amber oil	28.4	0.0364	<1	1053	6 MM BTH
1	Candies							Cleaver-
1			Amber oil	26.6	0.0341	6	2184	Brooks M4
			Amber oil	28.1	0.0360	<1	3361	
1	12.32				2.5			