

**12-3-11\*\*\*\*\* Demo Sites\*\*\*\*\***

these sites were developed over a 3.5 yr. period  
these sites are more thoroughly monitored\*\*\*

	CO	CO <sub>2</sub>	SO <sub>2</sub>	SO	NOx	CFM	Fuel used gal/day	Fuel savings	Stack temp.	Actual firing rate gph	% more run time
	PPM	%	PPM	PPM	PPM						
<b>Corona Films</b>											
Orig	38	11.6	47	340	90	790	17.8		460	4.17	
BB	1	13.6	68	21	82	380	12.6	29.21%	325	2.42	
Raw % reduction of emissions	97%	-17%	-45%	94%	9%	52%					
% reduction applying CFM reduction	99%	39%	25%	97%	53%			21.20%			23%
<b>Total % reduction/day /same BTU output</b>	<b>81%</b>	<b>29%</b>	<b>19%</b>	<b>73%</b>	<b>40%</b>						
<b>Paint Project (season1)</b>											
Orig	51	10.9	37	107	57	580	16.5		590	1.25	
BB w/#4	8	12.5	12	14	48	210	12.8	22.42%	420	0.94	
Raw % reduction of emissions	84%	-15%	68%	87%	16%	64%					
% reduction applying CFM reduction	90%	27%	79%	92%	46%			22.40%			1.5
<b>Total % reduction/day/same BTU output</b>	<b>87%</b>	<b>26%</b>	<b>77%</b>	<b>88%</b>	<b>43%</b>						
Orig	51	10.9	37	107	57	580	16.5		590	1.25	
season 2 BB w/#3	1	12.9	2	10	54	190	10.9	33.94%	445	0.82	
Raw % reduction of emissions	98%	-18%	95%	91%	5%	67%					
% reduction applying CFM reduction	99%	20%	96%	94%	36%			28.70%			0.13
<b>Total % reduction/day/ same BTU output</b>	<b>99%</b>	<b>20%</b>	<b>96%</b>	<b>94%</b>	<b>36%</b>						
<b>Brooks Home-season 1.</b>											
Orig	28	10.6	19	106	57	540	8.4		400	1.35	
BB (a)	3	12.9	22	35	83	290	5.8	31%	325	1.15	
Raw % reduction of emissions	89%	-22%	-16%	67%	-46%	46%					
% reduction applying CFM reduction	95%	44%	46%	85%	33%			31%			-10%
<b>Total % reduction/ day/same BTU output</b>	<b>97%</b>	<b>45%</b>	<b>47%</b>	<b>88%</b>	<b>38%</b>						
Orig	28	10.6	19	106	57	540	8.4		400	1.35	
season 3 BB (b)	2	12.3	23	21	108	290	5.6		322	1.08	
Raw % reduction of emissions	93%	-16%	-21%	80%	-89%	46%					
% reduction applying CFM reduction	97%	46%	44%	91%	12%			28.50%			10%
<b>Total % reduction/ day/same BTU output</b>	<b>96%</b>	<b>47%</b>	<b>48%</b>	<b>93%</b>	<b>14%</b>						
<b>Town of Needham, MA</b>											
Orig	85	7.9	41	265	67	990	42.8		655	4.97	
BB	6	10.9	25	23	87	475	28.18	34.16%	322	3.86	
Raw % reduction of emissions	93%	-38%	39%	91%	-30%	52%					
% reduction applying CFM reduction	96%	28%	68%	95%	32%			34.10%			-2%
<b>Total % reduction/day/ same BTU output</b>	<b>98%</b>	<b>30%</b>	<b>70%</b>	<b>96%</b>	<b>35%</b>						
<b>Mass. MCI - Dorm C Space heating - Boiler 1</b>											
Orig	32	11	45	153	86	875	20.6		575	2.18	
BB	6	12.4	38	65	95	620	13.7	33.50%	438	1.43	
Raw % reduction of emissions	81%	-13%	16%	58%	-10%	29%					
% reduction applying CFM reduction	95%	23%	75%	88%	68%			32.50%			3%
<b>Total % reduction/day/same BTU output</b>	<b>94%</b>	<b>21%</b>	<b>73%</b>	<b>86%</b>	<b>64%</b>						
<b>NH - Wastewater treatment plant</b>											
Orig	48	9.8	26	650	46	1690	55.6		470	4.1	
BB	9	11.2	35	55	76	590	35.8	35.61%	320	2.6?	
Raw % reduction of emissions	81%	-14%	-35%	92%	-65%	65%					
% reduction applying CFM reduction	88%	21%	12%	94%	-8%			31.70%			2%
<b>Total % reduction/day/same BTU output</b>	<b>87%</b>	<b>20%</b>	<b>37%</b>	<b>93%</b>	<b>-7%</b>						
<b>Villa Augustina School</b>											
Orig	89	10.9	189	499	175	9600	185		628	14.5	
BB (b)	8	12.7	185	28	163	3280	139	31%	565	9.5	
Raw % reduction of emissions	91%	-17%	2%	94%	7%	66%					
% reduction applying CFM reduction	94%	23%	36%	96%	39%			31%			24%
<b>Total % reduction/day / BTU outputf</b>	<b>78%</b>	<b>21%</b>	<b>13%</b>	<b>91%</b>	<b>41%</b>						
<b>Easter Seals</b>											
Orig	32	10.5	22	187	110	2,750	62		516	7.8	
BB	5	11.7	6	5	85	970	48.3	28.70%	284	5.3	
Raw % reduction of emissions	84%	-11%	73%	97%	23%	65%					
% reduction applying CFM reduction	90%	28%	82%	98%	50%			28.70%			2%
<b>Total % reduction/day / BTU outputf</b>	<b>88%</b>	<b>27%</b>	<b>81%</b>	<b>96%</b>	<b>48%</b>						
<b>TOTAL- AVERAGE Reductions-Demo sites.</b>											
	87%	21%	58%	89%	35%			28.20%			
<b>Jan 17-18 2012 testing</b>											
<b>CK Lab results of EPA Total Reductions</b>											
NO.2 fuel oil	65%	15%	36%	18%				28.00%	23%		
NO. 4 fuel oil/ BRB-57	65%	11%	28%	16%				30.00%	32%		
B-100 100% bio fuel	60%	9%	35%	5%				26%	21%		

Boiler sooted up above normal levels, sulfur soot being burned as well.  
% reduction of gases and fuel /degree day tested/aggrement of parties  
Total % reductions in lbs/day(CFD) of flue gasses.taken at base of stack; before regulator.  
Total % reductions in lbs/day EPA test of flue gasses.taken after air regulator.40%air dilution.

\* All sites have had a repeated testing on a regular basis to evaluate consistent value.  
\*\* All site have a wide range of boiler size, methods of heating, that represent real life conditions.  
\*\*\* Instrumentation used were EPA rated and non-EPA rated, some sites by 3ed party with simular results.