



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY COMPLIANCE SUMMARY REPORT



Date 4/23/22

Wheel Plant Wheelabrator North Andover
Unit 1 Unit Unit 1
Outlet Source Outlet

Date	Hour	On-Line Minutes	O2		NOx		SO2					CO			Carbon Feed		FF Temp (deg F)		Steam KLbs/Hr		
			Out Vol % Dry	Status	Outlet ppm 7%O2	Status	Outlet ppm 7%O2	Status	Inlet ppm 7%O2	Status	Removal	Status	Outlet ppm 7%O2	Status	4 Hr Block	Status	Lbs/Hr Avg.	8 Hr Block	1 Hr Avg.	4 Hr Block	1 Hr Avg.
4/23/2022	0	60	9.5		181		13		65		80		4			14		310		168.0	
4/23/2022	1	60	9.7		185		14		81		82		4			13		305		166.5	
4/23/2022	2	60	9.6		196		14		77		82		3			13		302		166.6	
4/23/2022	3	60	9.3		193		6		43		85		5	4		14		309	307	167.6	167.2
4/23/2022	4	60	9.5		193		11		47		77		4			13		312		166.6	
4/23/2022	5	60	9.6		195		10		45		77		4			13		312		165.8	
4/23/2022	6	60	9.3		190		8		53		85		3			13		312		166.1	
4/23/2022	7	60	9.1		189		3		46		93		3	3		13	13	306	311	166.7	166.3
4/23/2022	8	60	9.4		188		3		57		95		3			13		300		167.1	
4/23/2022	9	60	9.4		184		1		47		97		3			13		298		168.9	
4/23/2022	10	60	8.9		180		3		43		92		5			13		314		165.9	
4/23/2022	11	60	9.6		186		6		45		87		3	4		13		312	306	165.6	166.9
4/23/2022	12	60	9.2		192		4		43		90		3			13		312		165.5	
4/23/2022	13	60	9.4		194		12		61		80		4			14		313		164.8	
4/23/2022	14	60	9.1		193		4		41		90		4			13		313		165.9	
4/23/2022	15	60	9.2		196		4		37		90		4	4		13	13	315	313	168.1	166.0
4/23/2022	16	60	9.3		182		1		38		99		3			13		302		162.6	
4/23/2022	17	60	9.5		188		0		34		99		4			14		304		164.6	
4/23/2022	18	60	9.6		193		2		40		95		4			13		303		165.7	
4/23/2022	19	60	10.1		181		3		59		96		3	3		13		296	301	149.6	160.6
4/23/2022	20	60	9.9		172		2		45		95		3			14		302		149.2	
4/23/2022	21	60	10.0		182		5		46		89		2			13		307		150.6	
4/23/2022	22	60	9.8		179		5		48		90		2			13		309		151.2	
4/23/2022	23	60	9.4		185		15		70		78		2	2		14	14	310	307	163.8	153.7

Average:
Geometric Mean Average:

Limit:

187	4
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

91
≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

see above
≤ 12 lb/hr 8-HR. Block Average

see above
≤ 345 °F 4-HR Block Average

see above
≤ 173 klb/hr 4-HR Block Average

Status Flags

- I - Invalid
- B - Bad
- C - Calibration
- M - Maintenance
- F - Offline
- P - Purge
- T - Out of Control
- E - Excluded
- ^ - Startup
- * - Shutdown



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY COMPLIANCE SUMMARY REPORT



Date 4/23/22

Wheel Plant Wheelabrator North Andover
Unit 2 Unit Unit 1
Outlet Source Outlet

Date	Hour	On-Line Minutes	O2		NOx		SO2					CO			Carbon Feed		FF Temp (deg F)		Steam KLbs/Hr		
			Out Vol % Dry	Status	Outlet ppm 7%O2	Status	Outlet ppm 7%O2	Status	Inlet ppm 7%O2	Status	Removal	Status	Outlet ppm 7%O2	Status	4 Hr Block	Status	Lbs/Hr Avg.	8 Hr Block	1 Hr Avg.	4 Hr Block	1 Hr Avg.
4/23/2022	0	60	10.1		192		0		55		100		2			14		310		167.8	
4/23/2022	1	60	10.1		197		1		60		99		3			14		310		166.4	
4/23/2022	2	60	10.0		196		0		57		100		4			14		310		168.2	
4/23/2022	3	60	9.9		183		0		37		100		3	3		14		310	310	165.9	167.1
4/23/2022	4	60	9.8		187		1		39		98		9			14		310		166.3	
4/23/2022	5	60	10.0		191		1		50		98		2			14		310		167.6	
4/23/2022	6	60	9.9		185		1		37		97		3			14		310		166.5	
4/23/2022	7	60	9.8		197		0		35		99		2	4		15	14	310	310	167.7	167.0
4/23/2022	8	60	10.0		195		2		52		96		3			15		310		168.3	
4/23/2022	9	60	10.0		190		1		29		97		3			15		310		166.7	
4/23/2022	10	60	9.6		195		1		25		98		4			15		310		167.0	
4/23/2022	11	60	9.7		185		1		23		95		4	3		15		310	310	167.4	167.4
4/23/2022	12	60	9.8		199		0		26		99		4			15		310		167.3	
4/23/2022	13	60	9.8		192		1		50		99		3			14		310		167.6	
4/23/2022	14	60	9.5		201		0		28		98		3			13		310		167.5	
4/23/2022	15	60	9.6		195		0		27		100		2	3		12	14	310	310	167.6	167.5
4/23/2022	16	60	9.5		196		0		30		100		3			12		310		167.6	
4/23/2022	17	60	9.5		191		0		25		100		3			12		310		167.6	
4/23/2022	18	60	9.9		192		0		27		100		3			12		309		162.2	
4/23/2022	19	60	10.4		196		0		24		100		3	3		12		310	310	149.2	161.7
4/23/2022	20	60	10.4		199		0		31		99		3			12		310		149.9	
4/23/2022	21	60	10.4		193		0		36		100		2			12		310		149.6	
4/23/2022	22	60	10.3		195		1		41		98		3			13		310		151.5	
4/23/2022	23	60	9.8		193		0		56		99		1	2		12	12	310	310	166.2	154.3

Average: Geometric Mean Average:	193	0	OR	99	see above	see above	see above	see above			
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 4-HR Block Average	ppmc	≤ 12 8-HR. Block Average	lb/hr	≤ 345 °F 4-HR Block Average	≤ 173 4-HR Block Average	klb/hr

Status Flags

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 23-Apr-2022

Plant Wheelabrator North Andover
Unit Unit 1
Source Outlet

Opacity is a measure of how much soot or smoke may be contained in stack emissions. The more smoke that is contained in the emissions the higher the level of opacity. Continuous opacity monitors located after all of the air pollution control equipment measure the opacity of the emissions from each boiler. Typically the human eye can not detect or see smoke that is less than 5% opacity. You won't see smoke from a modern trash-to-energy plant although in colder weather you will see water vapor condensation, similar to seeing your breath on a cold day. This is not considered opacity. We have a permit limit established by the Massachusetts Department of Environmental Protection of 10% opacity averaged every six (6) minutes.

Limit 10 %

Time (hr)	1-6 min	7-12 min	13-18 min	19-24 min	25-30 min	31-36 min	37-42 min	43-48 min	49-54 min	55-60 min	Average
0	2	2	2	2	2	2	2	2	2	2	2
1	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2
3	2	2	2	2	2	2	2	2	2	2	2
4	2	2	2	2	2	2	2	2	2	2	2
5	2	2	2	2	2	2	2	2	2	2	2
6	2	IC	6	IC	2	2	2	2	2	2	2
7	2	2	2	2	2	2	2	2	2	2	2
8	2	2	2	2	2	2	2	2	2	2	2
9	2	2	2	2	2	2	2	2	2	2	2
10	2	2	2	2	2	2	2	2	2	2	2
11	2	2	2	2	2	2	2	2	2	2	2
12	2	2	2	2	2	2	2	2	2	2	2
13	2	2	2	2	2	2	2	2	2	2	2
14	2	2	2	2	2	2	2	2	2	2	2
15	2	2	2	2	2	2	2	2	2	2	2
16	2	2	2	2	2	2	2	2	2	2	2
17	2	2	2	2	2	2	2	2	2	2	2
18	2	2	2	2	2	2	2	2	2	2	2
19	2	2	2	2	2	2	2	2	2	2	2
20	2	2	2	2	2	2	2	2	2	2	2
21	2	2	2	2	2	2	2	2	2	2	2
22	2	2	2	2	2	2	2	2	2	2	2
23	2	2	2	2	2	2	2	2	2	2	2

Status Flags

I - Invalid C - Calibration F - Offline T - Out of Control ^ - Startup
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 23-Apr-2022

Plant Wheelabrator North Andover
Unit Unit 2
Source Outlet

Opacity is a measure of how much soot or smoke may be contained in stack emissions. The more smoke that is contained in the emissions the higher the level of opacity. Continuous opacity monitors located after all of the air pollution control equipment measure the opacity of the emissions from each boiler. Typically the human eye can not detect or see smoke that is less than 5% opacity. You won't see smoke from a modern trash-to-energy plant although in colder weather you will see water vapor condensation, similar to seeing your breath on a cold day. This is not considered opacity. We have a permit limit established by the Massachusetts Department of Environmental Protection of 10% opacity averaged every six (6) minutes.

Limit 10 %

Time (hr)	1-6 min	7-12 min	13-18 min	19-24 min	25-30 min	31-36 min	37-42 min	43-48 min	49-54 min	55-60 min	Average
0	2	2	2	2	2	2	2	2	2	2	2
1	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2
3	2	2	2	2	2	2	2	2	2	2	2
4	2	2	2	2	2	2	2	2	2	2	2
5	2	2	2	2	2	2	2	2	2	2	2
6	2	IBC	6	IBC	2	2	2	2	2	2	3
7	2	2	2	2	2	2	2	2	2	2	2
8	2	2	2	2	2	2	2	2	2	2	2
9	2	2	2	2	2	2	2	2	2	2	2
10	2	2	2	2	2	2	2	2	2	2	2
11	2	2	2	2	2	2	2	2	2	2	2
12	2	2	2	2	2	2	2	2	2	2	2
13	2	2	2	2	2	2	2	2	2	2	2
14	2	2	2	2	2	2	2	2	2	2	2
15	2	2	2	2	2	2	2	2	2	2	2
16	2	2	2	2	2	2	2	2	2	2	2
17	2	2	2	2	2	2	2	2	2	2	2
18	2	2	2	2	2	2	2	2	2	2	2
19	2	2	2	2	2	2	2	2	2	2	2
20	2	2	2	2	2	2	2	2	2	2	2
21	2	2	2	2	2	2	2	2	2	2	2
22	2	2	2	2	2	2	2	2	2	2	2
23	2	2	2	2	2	2	2	2	2	2	2

Status Flags

I - Invalid C - Calibration F - Offline T - Out of Control ^ - Startup
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown