



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



Date 6/22/22

Wheel Plant Wheelabrator North Andover
Unit 1 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.
6/22/2022	0	60	10.5		199		13		52		74		5			21		304		167.6	
6/22/2022	1	60	10.6		197		13		52		75		4			18		304		165.1	
6/22/2022	2	60	10.6		199		18		61		70		4			18		305		164.9	
6/22/2022	3	60	10.4		198		11		57		81		4	4		21		304	304	167.5	166.3
6/22/2022	4	60	10.6		194		2		33		93		4			19		304		165.5	
6/22/2022	5	60	10.6		197		13		50		74		5			19		305		164.7	
6/22/2022	6	60	10.6		196		6		41		85		5			11		304		167.0	
6/22/2022	7	60	11.1		198		19		45		58		5	5		14	18	304	304	164.4	165.4
6/22/2022	8	60	12.0		189		16		40		60		8			14		304		149.4	
6/22/2022	9	60	11.1		196		16		56		72		6			14		304		157.4	
6/22/2022	10	60	10.6		199		11		43		75		4			14		305		167.5	
6/22/2022	11	60	10.6		199		16		48		66		4	6		14		305	304	167.5	160.5
6/22/2022	12	60	10.6		197		15		52		71		6			14		304		164.4	
6/22/2022	13	60	10.7		199		14		48		70		3			13		305		164.3	
6/22/2022	14	60	10.6		197		10		36		72		4			13		305		165.5	
6/22/2022	15	60	10.5		192		10		46		78		5	5		14	14	304	304	164.4	164.6
6/22/2022	16	60	10.5		195		11		43		76		4			13		304		169.2	
6/22/2022	17	60	10.8		198		14		45		70		3			14		305		167.1	
6/22/2022	18	60	10.7		200		17		46		64		3			14		304		166.8	
6/22/2022	19	60	10.6		197		18		62		71		4	3		14		305	304	167.6	167.7
6/22/2022	20	60	10.5		198		23		82		72		4			14		305		170.1	
6/22/2022	21	60	10.6		199		16		56		71		4			14		304		166.4	
6/22/2022	22	60	10.4		198		18		60		70		4			15		304		166.0	
6/22/2022	23	60	10.4		198		11		41		72		4	4		14	14	305	304	168.6	167.7

Average: Geometric Mean Average:	197	13	OR	74	see above	see above	see above	see above
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 ppmc 4-HR Block Average	≤ 12 lb/hr 8-HR. Block Average	≤ 345 °F 4-HR Block Average	≤ 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 6/22/22

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.
6/22/2022	0	60	9.9		190		20		32		35		1			16		317		166.8	
6/22/2022	1	60	10.2		193		21		48		56		0			13		318		167.4	
6/22/2022	2	60	10.3		192		14		46		70		2			12		312		166.1	
6/22/2022	3	60	10.2		189		9		48		80		1	1		16		310	314	167.5	166.9
6/22/2022	4	60	10.1		187		1		29		96		3			14		301		167.6	
6/22/2022	5	60	10.0		186		3		27		89		2			15		303		166.3	
6/22/2022	6	60	10.1		186		1		20		93		3			14		305		166.1	
6/22/2022	7	60	10.0		176		10		37		73		79	22		14	14	306	304	169.9	167.5
6/22/2022	8	60	10.1		188		0		20		100		2			14		290		163.5	
6/22/2022	9	60	9.9		193		2		39		96		5			14		288		164.6	
6/22/2022	10	60	9.8		189		1		25		97		4			14		292		166.4	
6/22/2022	11	60	9.9		187		2		20		92		3	4		14		296	291	166.7	165.3
6/22/2022	12	60	9.8		179		1		24		97		3			14		294		166.2	
6/22/2022	13	60	9.8		183		0		26		98		3			13		288		166.6	
6/22/2022	14	60	9.6		188		0		16		98		4			12		291		166.6	
6/22/2022	15	60	9.8		187		5		29		83		3	3		12	13	299	293	166.6	166.5
6/22/2022	16	60	9.8		186		9		23		62		2			14		303		166.8	
6/22/2022	17	60	9.8		180		8		18		56		2			14		309		168.1	
6/22/2022	18	60	9.9		179		3		13		75		1			13		310		167.5	
6/22/2022	19	60	9.8		177		10		21		52		2	2		14		310	308	168.6	167.8
6/22/2022	20	60	10.1		189		21		44		51		2			14		308		167.6	
6/22/2022	21	60	9.9		183		15		27		44		2			14		308		166.9	
6/22/2022	22	60	9.9		187		17		21		18		2			17		311		168.2	
6/22/2022	23	60	9.9		180		11		16		33		3	2		14	14	315	310	167.4	167.5

Average:
Geometric Mean Average:

Limit:

186	3
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

87
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≤ 12 8-HR. Block Average

lb/hr

see above
≤ 345 4-HR Block Average

°F

see above
≤ 173 4-HR Block Average

klb/hr

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 OPACITY REPORT



Date 22-Jun-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	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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 22-Jun-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	1	1	0	0	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	0	1	1	1
3	0	0	1	1	0	1	1	0	0	1	0
4	1	0	0	0	1	1	0	1	1	1	0
5	1	1	1	0	1	1	1	1	1	1	0
6	2	IBC	5	IBC	1	0	1	1	1	1	1
7	1	1	1	1	1	0	1	1	1	0	0
8	1	1	1	1	1	1	1	1	1	1	1
9	0	1	1	1	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	1	1	1	1
11	1	1	1	1	1	1	1	1	1	1	1
12	1	1	1	1	1	1	1	1	1	1	1
13	0	1	1	1	0	0	1	0	0	0	0
14	1	1	0	1	1	1	1	1	1	1	1
15	1	1	1	1	1	1	1	1	1	1	1
16	1	1	1	1	1	1	1	1	1	1	1
17	1	1	1	1	1	1	1	1	1	1	1
18	1	1	1	1	0	1	1	1	1	1	1
19	1	1	1	1	0	0	1	1	1	0	0
20	1	1	1	1	1	1	1	1	1	1	1
21	0	0	0	0	0	0	1	1	1	0	0
22	1	1	1	0	0	0	1	0	0	0	0
23	1	1	1	1	1	1	1	1	1	1	1

Status Flags

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