



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



Date 4/5/22

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.
4/5/2022	0	60	10.3		200		38		85		55		5			14		311		164.8	
4/5/2022	1	60	10.1		192		35		111		69		6			13		310		167.3	
4/5/2022	2	60	10.0		195		19		60		69		5			14		306		167.2	
4/5/2022	3	60	10.2		195		19		56		66		5	5		14		310	310	165.7	166.3
4/5/2022	4	60	10.2		187		23		50		54		6			15		305		168.6	
4/5/2022	5	60	10.3		197		28		82		66		6			12		310		167.8	
4/5/2022	6	60	10.3		190		21		59		64		6			14		309		165.4	
4/5/2022	7	60	10.1		191		19		45		58		6	6		15	14	314	310	165.4	166.8
4/5/2022	8	60	10.3		180		20		57		65		8			13		315		165.4	
4/5/2022	9	60	10.0		183		11		61		81		8			14		311		169.4	
4/5/2022	10	60	10.5		178		7		90	IBM	92	IBM	6			14		299		166.7	
4/5/2022	11	60	10.4		190		12		52	IBM	77	IBM	6	7		13		301	307	164.9	166.6
4/5/2022	12	60	10.5		192		12		48	IBCM	74	IBCM	5			13		312		165.7	
4/5/2022	13	60	10.3		196		19		38		49		6			13		314		167.8	
4/5/2022	14	60	10.2		197		18		30		41		6			13		315		169.2	
4/5/2022	15	60	10.3		189		11		23		50		7	6		12	13	316	314	167.1	167.5
4/5/2022	16	60	10.3		186		5		21		77		6			13		313		165.0	
4/5/2022	17	60	10.4		195		6		19		71		6			13		307		165.5	
4/5/2022	18	60	10.7		194		18		41		56		7			14		312		166.1	
4/5/2022	19	60	10.6		194		11		32		64		5	6		13		313	311	166.9	165.9
4/5/2022	20	60	10.5		189		20		56		65		5			13		309		165.2	
4/5/2022	21	60	10.4		190		16		44		64		5			13		309		165.4	
4/5/2022	22	60	10.3		194		22		74		70		5			13		315		166.2	
4/5/2022	23	60	10.2		189		21		68		68		6	5		14	13	308	310	166.2	165.7

Average:
Geometric Mean Average:

Limit:

191	16
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

64
≥ 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 4/5/22

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.
4/5/2022	0	60	10.2		195		4		24		83		2			14		310		167.9	
4/5/2022	1	60	10.2		196		11		50		79		3			13		310		167.3	
4/5/2022	2	60	10.2		194		5		29		84		2			14		310		167.5	
4/5/2022	3	60	10.3		196		6		38		85		2	2		14		310	310	168.4	167.8
4/5/2022	4	60	10.3		190		5		22		75		2			14		310		167.0	
4/5/2022	5	60	10.2		193		5		29		82		2			13		310		168.3	
4/5/2022	6	60	10.4		191		5		24		80		2			14		310		167.3	
4/5/2022	7	60	10.3		194		7		35		80		3	2		12	14	310	310	168.2	167.7
4/5/2022	8	60	10.4		191		5		33		85		3			12		310		166.8	
4/5/2022	9	60	10.4		191		2		28		91		3			12		310		165.6	
4/5/2022	10	60	10.4		194		3		22	IBM	88	IBM	2			13		310		165.7	
4/5/2022	11	60	10.2		183		1		23	IBM	94	IBM	2	3		13		310	310	168.2	166.6
4/5/2022	12	60	10.4		181		1		65	IBCM	98	IBCM	1			13		310		167.3	
4/5/2022	13	60	10.3		193		5		63		93		3			14		310		167.3	
4/5/2022	14	60	10.2		186		3		46		93		2			13		310		167.6	
4/5/2022	15	60	10.1		193		3		45		93		3	2		14	13	310	310	167.0	167.3
4/5/2022	16	60	10.2		190		2		32		95		2			14		310		169.0	
4/5/2022	17	60	10.6		194		1		33		96		2			12		310		166.6	
4/5/2022	18	60	10.4		192		12		82		85		3			13		310		168.3	
4/5/2022	19	60	10.4		193		5		55		92		2	2		13		310	310	166.6	167.6
4/5/2022	20	60	10.4		191		4		58		93		3			12		310		167.5	
4/5/2022	21	60	10.3		192		6		61		90		2			12		310		168.3	
4/5/2022	22	60	10.2		194		9		74		88		2			13		310		167.8	
4/5/2022	23	60	10.2		196		19		100		81		3	2		14	13	310	310	167.4	167.7

Average:
Geometric Mean Average:

Limit:

192	4
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

88
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 05-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 05-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	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

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