



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



Date 4/20/22

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.
4/20/2022	0	60	9.5		161		5		32		83		3			13		300		163.2	
4/20/2022	1	60	9.4		171		8		37		77		3			13		303		163.2	
4/20/2022	2	60	9.4		178		15		35		58		3			13		306		165.2	
4/20/2022	3	60	9.5		186		18		35		49		3	3		13		306	304	164.2	163.9
4/20/2022	4	60	9.4		185		21		33		37		4			13		314		166.7	
4/20/2022	5	60	9.5		187		19		32		39		3			13		315		164.7	
4/20/2022	6	60	9.4		186		21		39		46		4			13		316		164.5	
4/20/2022	7	60	9.3		177		14		32		58		6	4		13	13	315	315	162.8	164.7
4/20/2022	8	60	9.7		188		21		40		47		4			13		312		164.9	
4/20/2022	9	60	9.9		192		18		75		76		2			13		302		166.5	
4/20/2022	10	60	9.8		188		11		57		80		4			13		304		165.1	
4/20/2022	11	60	9.6		179		14		72		80		4	4		13		308	306	165.2	165.4
4/20/2022	12	60	9.8		173		6		68		92		4			13		302		164.9	
4/20/2022	13	60	10.6		194		16		77		79		6			13		314		164.0	
4/20/2022	14	60	9.9		187		16		84		81		5			13		309		166.7	
4/20/2022	15	60	9.5		196		16		64		74		4	5		13	13	311	309	168.5	166.0
4/20/2022	16	60	9.8		195		8		51		84		4			13		306		166.3	
4/20/2022	17	60	10.1		191		10		49		80		4			13		299		165.4	
4/20/2022	18	60	10.0		193		15		55		72		4			15		307		166.1	
4/20/2022	19	60	9.9		197		24		98		75		3	4		13		310	305	166.0	166.0
4/20/2022	20	60	9.6		195		20		78		74		4			13		314		168.7	
4/20/2022	21	60	9.5		196		16		52		70		4			13		312		167.4	
4/20/2022	22	60	9.7		194		13		48		74		4			13		311		167.8	
4/20/2022	23	60	9.6		198		8		44		82		3	4		13	13	303	310	167.6	167.9

Average:  
Geometric Mean Average:

Limit:

187	14
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

73
≥ 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



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Date 4/20/22

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.
4/20/2022	0	60	9.8		194		0		39		100		4			11		310		166.0	
4/20/2022	1	60	9.7		190		0		30		99		2			14		310		165.8	
4/20/2022	2	60	9.9		194		1		28		98		3			14		310		165.3	
4/20/2022	3	60	9.6		197		0		27		99		2	3		12		310	310	165.3	165.6
4/20/2022	4	60	9.8		198		0		29		100		4			13		310		164.3	
4/20/2022	5	60	9.7		190		1		29		98		3			12		310		165.9	
4/20/2022	6	60	9.7		190		3		59		96		4			12		310		165.7	
4/20/2022	7	60	9.8		199		0		37		99		3	4		14	13	310	310	165.3	165.3
4/20/2022	8	60	10.0		187		1		36		98		3			13		310		165.0	
4/20/2022	9	60	10.5		187		1		70		98		3			14		310		163.6	
4/20/2022	10	60	10.5		188		2		90		98		2			13		310		164.9	
4/20/2022	11	60	10.2		177		1		59		98		3	3		13		310	310	166.9	165.1
4/20/2022	12	60	10.3		191		1		79		99		4			13		310		165.1	
4/20/2022	13	60	9.9		182		0		77		100		4			13		310		164.9	
4/20/2022	14	60	10.0		182		5		111		96		4			13		310		165.2	
4/20/2022	15	60	9.9		194		1		79		99		3	4		13	13	310	310	166.2	165.4
4/20/2022	16	60	10.0		187		1		77		99		3			12		310		167.9	
4/20/2022	17	60	10.0		186		0		58		99		4			16		310		167.2	
4/20/2022	18	60	9.9		189		0		79		100		3			17		310		168.0	
4/20/2022	19	60	10.0		189		3		89		97		3	3		14		310	310	167.7	167.7
4/20/2022	20	60	10.0		191		0		73		99		3			15		310		167.8	
4/20/2022	21	60	10.1		190		1		60		99		2			15		310		167.3	
4/20/2022	22	60	9.9		188		1		66		99		4			15		310		167.2	
4/20/2022	23	60	10.0		198		0		62		99		2	3		15	15	310	310	167.8	167.5

Average:  
Geometric Mean Average:

Limit:

190	1
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

99
≥ 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 20-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 20-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

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