



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



Date 5/26/22

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.
5/26/2022	0	60	10.0		185		4		53		93		4			14		299		167.4	
5/26/2022	1	60	10.0		195		3		43		93		4			10		299		167.2	
5/26/2022	2	60	10.1		189		5		49		89		4			14		299		167.1	
5/26/2022	3	60	10.1		192		3		40		92		4	4		14		299	299	164.8	166.6
5/26/2022	4	60	9.9		194		6		51		89		4			14		300		168.6	
5/26/2022	5	60	10.3		194		4		20		79		5			14		299		167.3	
5/26/2022	6	60	10.3		185		13		43		70		5			14		299		167.3	
5/26/2022	7	60	10.1		193		7		35		79		6	5		14	13	299	299	166.4	167.4
5/26/2022	8	60	10.6		193		3		33		92		6			12		299		161.8	
5/26/2022	9	60	10.6		193		4		30		87		5			15		299		163.4	
5/26/2022	10	60	10.5		190		2		30		92		4			14		299		166.7	
5/26/2022	11	60	10.6		196		4		32		88		6	5		14		300	299	164.6	164.1
5/26/2022	12	60	10.3		194		5		36		85		6			14		300		167.2	
5/26/2022	13	60	10.4		198		3		34		90		6			14		299		167.3	
5/26/2022	14	60	10.4		197		10		49		80		5			14		300		166.2	
5/26/2022	15	60	10.8		194		9		39		76		3	5		14	14	299	299	167.0	166.9
5/26/2022	16	60	10.5		198		5		34		85		5			14		300		166.6	
5/26/2022	17	60	10.4		197		6		39		85		5			14		299		167.3	
5/26/2022	18	60	10.5		195		11		45		76		4			14		299		165.9	
5/26/2022	19	60	10.3		194		3		36		92		5	5		14		299	299	166.4	166.5
5/26/2022	20	60	10.4		197		3		36		92		5			14		299		167.1	
5/26/2022	21	60	10.3		194		4		43		91		6			13		299		167.4	
5/26/2022	22	60	10.2		197		5		46		90		5			13		300		165.6	
5/26/2022	23	60	10.1		195		7		49		86		5	5		13	14	299	299	169.1	167.3

Average:  
Geometric Mean Average:

Limit:

194	5
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

87
≥ 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 5/26/22

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.
5/26/2022	0	60	10.7		198		1		12		88		1			15		305		167.0	
5/26/2022	1	60	10.7		197		2		25		93		1			14		309		166.9	
5/26/2022	2	60	10.6		200		2		26		93		1			15		314		168.1	
5/26/2022	3	60	10.7		195		2		18		91		1	I		14		316	311	168.0	167.5
5/26/2022	4	60	10.6		197		2		11		81		2			14		312		167.9	
5/26/2022	5	60	10.6		200		2		17		89		0			14		309		168.1	
5/26/2022	6	60	10.6		197		3		31		90		0			14		310		165.9	
5/26/2022	7	60	10.5		197		3		21		87		1	I		14	14	311	311	167.8	167.4
5/26/2022	8	60	10.5		197		2		15		88		1			15		306		165.8	
5/26/2022	9	60	10.4		195		1		12		87		2			14		307		167.7	
5/26/2022	10	60	10.4		199		2		5		71		1			14		312		166.2	
5/26/2022	11	60	10.6		197		2		15		85		1	I		14		290	304	166.8	166.6
5/26/2022	12	60	10.5		197		2		14		82		1			14		311		166.5	
5/26/2022	13	60	10.4		198		2		16		88		2			14		307		167.7	
5/26/2022	14	60	10.4		198		3		17		83		1			11		307		168.2	
5/26/2022	15	60	10.2		198		2		14		83		0	I		13	14	306	308	168.1	167.6
5/26/2022	16	60	10.2		197		2		9		74		2			13		313		167.1	
5/26/2022	17	60	10.1		199		2		11		81		1			11		309		167.9	
5/26/2022	18	60	10.2		197		2		9		77		1			17		309		168.1	
5/26/2022	19	60	10.1		197		2		7		74		1	I		18		312	311	167.3	167.6
5/26/2022	20	60	10.0		198		2		11		83		1			15		316		167.2	
5/26/2022	21	60	10.2		196		2		13		84		1			11		315		166.2	
5/26/2022	22	60	10.2		197		2		14		85		1			13		316		168.0	
5/26/2022	23	60	10.1		200		2		11		78		1	I		11	14	311	314	168.0	167.3

Average: Geometric Mean Average:	198	2	<b>OR</b>	85	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 OPACITY REPORT



Date 26-May-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 26-May-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	1	1	1	0	0	0	1	0	0
1	1	1	1	1	1	1	1	0	0	1	0
2	1	1	1	1	1	1	1	0	0	1	0
3	0	0	0	1	0	1	1	0	1	1	0
4	0	0	0	0	0	1	1	1	1	1	0
5	0	0	0	0	0	0	0	1	1	0	0
6	2	IBC	5	IBC	0	0	1	0	1	1	1
7	1	1	1	1	1	1	0	0	0	1	0
8	1	1	1	1	1	1	1	1	1	1	1
9	1	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	0	1	1	1	1	1	1	0
12	1	0	0	0	0	0	0	1	1	0	0
13	1	1	1	1	0	0	0	0	0	0	0
14	0	0	1	1	0	0	0	0	0	0	0
15	1	1	1	1	1	1	0	0	0	1	0
16	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	1	1	0	0	0
19	1	1	0	0	0	0	0	0	0	0	0
20	0	1	1	0	0	0	0	0	0	0	0
21	0	1	0	1	0	0	0	0	0	0	0
22	0	1	1	1	1	1	1	0	0	1	0
23	0	0	1	0	1	1	1	1	0	1	0

**Status Flags**

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