



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



Date 2/11/23

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.
2/11/2023	0	60	10.5		198		16		14		0		4			14		309		165.9	
2/11/2023	1	60	10.5		198		16		24		34		5			13		310		167.4	
2/11/2023	2	60	10.6		192		20		39		48		5			14		309		165.5	
2/11/2023	3	60	10.8		199		23		38		41		5	5		13		309	309	166.7	166.4
2/11/2023	4	60	10.8		197		22		26		14		5			14		310		167.3	
2/11/2023	5	60	10.6		198		22		32		32		4			14		310		165.8	
2/11/2023	6	60	10.6		199		12		15		24		4			14		309		165.7	
2/11/2023	7	60	10.6		198		8		7		0		4	4		13	14	310	310	163.8	165.6
2/11/2023	8	60	10.9		200		13		8		0		3			13		308		163.3	
2/11/2023	9	60	10.8		186		19		34		44		4			14		310		168.1	
2/11/2023	10	60	11.2		201		24		37		35		2			14		309		165.8	
2/11/2023	11	60	11.3		197		19		22		12		3	3		13		309	309	165.8	165.8
2/11/2023	12	60	11.1		201		18		15		0		4			14		309		166.0	
2/11/2023	13	60	10.9		198		17		9		0		3			14		310		165.0	
2/11/2023	14	60	10.8		200		12		5		0		3			14		310		165.6	
2/11/2023	15	60	10.7		198		8		7		0		4	4		13	14	309	309	165.0	165.4
2/11/2023	16	60	10.7		191		5		10		50		3			14		309		167.2	
2/11/2023	17	60	10.9		200		18		27		32		3			14		310		165.9	
2/11/2023	18	60	11.0		198		12		13		4		4			14		309		166.4	
2/11/2023	19	60	11.0		197		17		23		27		3	3		14		310	309	165.9	166.4
2/11/2023	20	60	11.1		200		18		26		31		3			14		309		164.3	
2/11/2023	21	60	10.9		199		17		19		11		3			14		310		165.6	
2/11/2023	22	60	11.1		195		20		21		2		2			13		309		167.2	
2/11/2023	23	60	11.0		200		17		10		0		3	3		14	14	309	309	165.8	165.7

Average:  
Geometric Mean Average:

Limit:

197	15
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

9
≥ 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 COMPLIANCE SUMMARY REPORT



Date 2/11/23

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.
2/11/2023	0	60	10.3		164		12		47		75		9			13		310		166.6	
2/11/2023	1	60	10.4		165		11		42		73		8			12		310		166.8	
2/11/2023	2	60	10.5		172		16		52		69		8			13		310		166.8	
2/11/2023	3	60	10.6		167		20		75		74		8	8		15		310	310	167.1	166.8
2/11/2023	4	60	10.6		165		24		73		67		9			14		310		166.7	
2/11/2023	5	60	10.7		168		17		45		62		7			13		310		167.6	
2/11/2023	6	60	10.7		173		16		35		54		7			13		310		165.2	
2/11/2023	7	60	10.6		180		9		29		70		5	7		14	13	310	310	167.3	166.7
2/11/2023	8	60	10.9		158		14		38		62		5			14		310		166.6	
2/11/2023	9	60	10.7		167		21		63		67		7			13		310		166.5	
2/11/2023	10	60	11.0		156		23		64		65		4			14		310		166.8	
2/11/2023	11	60	10.8		160		15		47		68		5	5		13		310	310	166.1	166.5
2/11/2023	12	60	10.7		171		6		31		79		6			14		310		166.3	
2/11/2023	13	60	10.7		163		8		37		79		6			14		310		166.9	
2/11/2023	14	60	10.7		174		8		34		77		5			14		310		166.3	
2/11/2023	15	60	10.6		173		7		36		81		5	6		14	14	310	310	166.6	166.5
2/11/2023	16	60	10.6		169		6		36		84		4			13		310		166.6	
2/11/2023	17	60	10.5		170		5		37		87		4			13		310		166.4	
2/11/2023	18	60	10.6		174		5		34		85		4			13		310		166.9	
2/11/2023	19	60	10.7		168		6		38		83		4	4		13		310	310	166.8	166.7
2/11/2023	20	60	10.9		169		14		54		74		4			14		310		166.9	
2/11/2023	21	60	10.8		176		19		62		70		4			14		310		166.1	
2/11/2023	22	60	11.0		163		30		99		70		4			14		310		166.3	
2/11/2023	23	60	10.8		162		23		76		70		4	4		14	14	310	310	167.3	166.6

Average:  
Geometric Mean Average:

Limit:

168	12
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

74
≥ 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

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# WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 11-Feb-2023

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	1	1	1	1	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	1	1	1	1
3	1	1	1	1	1	1	1	1	1	1	1
4	1	1	1	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	1	1	1	1
6	2	IC	7	IC	1	1	1	1	1	1	2
7	1	1	1	2	1	2	1	1	1	1	1
8	2	2	2	2	2	2	2	1	1	2	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	1	1	1	1	1	1	1	1
12	1	1	1	1	1	1	1	1	1	1	1
13	1	1	1	1	1	1	1	1	1	1	1
14	1	1	1	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	1	1	1	1	1	1	1
19	1	1	1	1	1	1	1	1	1	1	1
20	1	1	1	1	1	1	1	1	1	1	1
21	1	1	1	1	1	1	1	1	1	1	1
22	1	1	1	1	1	1	1	1	1	1	1
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



# WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 11-Feb-2023

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	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	1	1	1	1
3	1	1	1	1	1	1	1	1	1	1	1
4	1	1	1	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	1	1	1	1
6	2	IBC	5	IBC	1	1	1	1	1	1	2
7	1	1	1	1	1	1	1	1	1	1	1
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	1	1	1	1	1	1	1	1
12	1	1	1	1	1	1	1	1	1	1	1
13	1	1	1	2	2	2	1	1	2	2	1
14	1	1	1	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	1	1	1	1	1	1	1
19	1	1	1	1	1	1	1	1	1	1	1
20	1	1	1	1	1	1	1	1	1	1	1
21	1	1	1	1	1	1	1	1	1	1	1
22	1	1	1	1	1	1	1	1	1	1	1
23	1	1	1	1	1	1	1	1	1	1	1

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