



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



Date 9/13/23

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.
9/13/2023	0	60	10.0		149		9		71		87		0			17		309		169.2	
9/13/2023	1	60	10.1		137		15		89		83		0			15		309		166.0	
9/13/2023	2	60	9.8		150		10		77		87		0			15		310		167.7	
9/13/2023	3	60	9.9		143		17		96		82		0	0		14		310	309	166.4	167.3
9/13/2023	4	60	10.0		148		9		80		88		0			15		309		167.9	
9/13/2023	5	60	9.9		145		2		53		96		0			14		310		165.6	
9/13/2023	6	60	9.9		142		4		53		92		0			14		309		165.4	
9/13/2023	7	60	10.1		149		16		97		83		0	0		14	15	310	309	165.1	166.0
9/13/2023	8	60	10.3		142		12		72		83		0			14		309		166.4	
9/13/2023	9	60	10.1		142		12		67		82		0			13		309		168.2	
9/13/2023	10	60	10.0		140		6		63		90		0			14		310		165.9	
9/13/2023	11	60	10.0		143		5		60		92		0	0		17		309	309	168.4	167.2
9/13/2023	12	60	9.6		139		5		66		93		0			14		310		168.7	
9/13/2023	13	60	10.0		137		2		57		97		1			15		308		167.0	
9/13/2023	14	60	10.1		144		8		81		90		0			14		311		167.5	
9/13/2023	15	60	9.6		143		4		62		94		5	2		14	14	310	310	166.0	167.3
9/13/2023	16	60	10.0		140		0		44		100		0			14		309		165.2	
9/13/2023	17	60	10.1		139		5		68		92		0			14		310		166.6	
9/13/2023	18	60	9.9		144		18		98		82		0			14		309		165.8	
9/13/2023	19	60	9.9		142		15		86		82		0	0		14		310	309	165.4	165.7
9/13/2023	20	60	9.9		142		3		49		93		0			14		309		167.9	
9/13/2023	21	60	9.8		149		6		66		91		7			14		310		167.2	
9/13/2023	22	60	9.7		140		9		66		87		2			15		308		166.9	
9/13/2023	23	60	9.7		143		11		74		86		0	2		14	14	310	309	166.4	167.1

Average:  
Geometric Mean Average:

Limit:

143	6
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

92
≥ 80% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≥ 12 8-HR. Block Average

lb/hr

see above
≤ 345 °F 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 9/13/23

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.
9/13/2023	0	60	9.6		140		1		64		98		6			15		310		166.6	
9/13/2023	1	60	9.6		139		2		79		97		6			15		310		167.2	
9/13/2023	2	60	9.5		140		7		83		92		6			15		312		167.0	
9/13/2023	3	60	9.6		140		3		76		96		6	6		15		310	311	167.0	166.9
9/13/2023	4	60	9.7		142		0		66		100		6			14		310		167.2	
9/13/2023	5	60	9.8		140		0		48		100		5			15		310		165.0	
9/13/2023	6	60	9.8		138		0		33		100		6			15		310		167.2	
9/13/2023	7	60	9.8		141		0		32		100		6	6		14	15	310	310	167.0	166.6
9/13/2023	8	60	9.9		139		0		22		100		6			14		310		167.5	
9/13/2023	9	60	9.8		140		0		24		100		5			14		310		167.9	
9/13/2023	10	60	9.7		140		0		26		100		5			11		310		167.0	
9/13/2023	11	60	9.7		139		0		30		100		4	5		14		310	310	168.2	167.6
9/13/2023	12	60	10.2		141		0		39		100		6			13		310		167.6	
9/13/2023	13	60	10.3		138		0		27		100		6			14		311		150.3	
9/13/2023	14	60	9.9		139		0		41		100		5			13		309		168.4	
9/13/2023	15	60	9.8		141		0		30		100		5	6		14	13	311	310	166.3	163.2
9/13/2023	16	60	9.7		139		0		31		100		7			14		310		166.4	
9/13/2023	17	60	9.6		139		0		43		100		6			14		310		167.9	
9/13/2023	18	60	9.8		139		0		63		100		6			15		310		166.3	
9/13/2023	19	60	9.9		140		0		66		100		6	6		14		310	310	166.7	166.8
9/13/2023	20	60	10.0		139		2		70		97		5			15		310		167.5	
9/13/2023	21	60	9.9		140		0		51		100		6			14		310		167.1	
9/13/2023	22	60	10.0		140		0		49		100		5			14		310		167.3	
9/13/2023	23	60	9.8		140		0		51		100		5	5		14	14	310	310	166.9	167.2

Average:  
Geometric Mean Average:

Limit:

140	0
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

100
≥ 80% 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 13-Sep-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	0	1	0	0	0	0	1	0	0	0
1	1	1	1	1	0	1	1	1	0	1	0
2	1	1	1	0	1	1	0	0	0	1	0
3	1	1	1	0	0	0	0	1	1	0	0
4	1	0	1	1	1	1	1	1	1	1	0
5	0	1	1	1	1	1	1	1	0	1	0
6	3	IC	5	IC	1	1	0	1	1	1	1
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	0	1	0
12	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0
14	0	1	1	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	1	0	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	0	1	0	0	0
19	0	1	0	0	0	0	0	0	0	0	0
20	0	1	0	0	1	1	1	1	1	1	0
21	1	1	1	0	1	0	1	1	1	0	0
22	1	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	1	1	0	0

**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 13-Sep-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	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	2	IBC	4	IBC	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0

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