



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



Date 12/8/23

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.
12/8/2023	0	60	10.4		142		15		71		79		0			13		310		166.7	
12/8/2023	1	60	10.5		142		14		59		77		0			14		310		167.7	
12/8/2023	2	60	10.5		141		15		56		73		0			13		309		167.5	
12/8/2023	3	60	10.5		139		16		67		77		0	0		14		309	310	165.4	166.8
12/8/2023	4	60	10.4		145		12		53		77		0			13		309		168.4	
12/8/2023	5	60	10.6		139		18		76		77		0			14		309		169.2	
12/8/2023	6	60	10.7		141		13		55		77		0			13		310		166.5	
12/8/2023	7	60	10.4		141		12		73		84		2	1		12	13	309	309	164.0	167.0
12/8/2023	8	60	10.3		140		16		86		82		1			13		309		165.3	
12/8/2023	9	60	10.4		140		15		86		83		1			13		309		166.3	
12/8/2023	10	60	10.6		141		12		71		84		1			13		309		166.7	
12/8/2023	11	60	10.5		140		15		82		82		1	1		13		309	309	168.5	166.7
12/8/2023	12	60	10.7		142		14		60		77		1			13		309		167.2	
12/8/2023	13	60	10.6		141		7		41		83		1			13		310		166.4	
12/8/2023	14	60	10.4		141		5		40		88		1			13		310		166.9	
12/8/2023	15	60	10.3		141		11		44		75		1	1		13	13	309	309	165.0	166.4
12/8/2023	16	60	10.3		141		9		34		73		1			13		310		165.8	
12/8/2023	17	60	10.7		140		6		30		78		0			13		309		168.5	
12/8/2023	18	60	11.0		140		4		27		84		0			13		309		167.7	
12/8/2023	19	60	10.9		140		8		35		78		0	0		13		310	309	166.0	167.0
12/8/2023	20	60	10.9		141		10		37		74		0			13		310		166.4	
12/8/2023	21	60	10.8		140		2		33		93		0			13		309		166.8	
12/8/2023	22	60	10.6		143		11		64		83		1			13		310		165.6	
12/8/2023	23	60	10.6		141		12		52		77		0	0		13	13	309	309	166.7	166.4

<b>Average:</b>	<b>141</b>	<b>10</b>	<b>OR</b>	<b>81</b>		see above	see above	see above	
<b>Geometric Mean Average:</b>						≤ 69 ppmc	≥ 12 lb/hr	≤ 345 °F	≤ 173 klb/hr
<b>Limit:</b>	≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 80% Removal Efficiency		4-HR Block Average	8-HR. Block Average	4-HR Block Average	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 12/8/23

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.
12/8/2023	0	60	10.1		141		5		54		90		8			13		310		165.5	
12/8/2023	1	60	10.3		139		9		59		85		7			13		310		168.0	
12/8/2023	2	60	10.3		140		10		55		82		7			13		310		167.3	
12/8/2023	3	60	10.3		139		11		56		81		7	7		13		310	310	166.9	166.9
12/8/2023	4	60	10.2		144		4		50		92		6			13		310		167.7	
12/8/2023	5	60	10.3		140		4		32		88		5			13		310		167.6	
12/8/2023	6	60	10.3		140		2		25		94		5			13		310		167.7	
12/8/2023	7	60	10.1		141		5		35		85		6	5		13	13	310	310	167.6	167.6
12/8/2023	8	60	10.2		137		11		36		69		6			13		310		166.6	
12/8/2023	9	60	10.2		140		8		53		85		5			13		310		167.8	
12/8/2023	10	60	10.2		141		1		38		98		5			13		310		167.3	
12/8/2023	11	60	10.4		140		2		48		96		4	5		13		310	310	167.2	167.2
12/8/2023	12	60	10.4		138		3		51		93		4			12		310		167.9	
12/8/2023	13	60	10.3		139		0		41		99		4			14		310		168.2	
12/8/2023	14	60	10.2		141		0		41		99		5			14		310		167.3	
12/8/2023	15	60	9.9		140		0		32		100		4	4		13	13	310	310	168.3	167.9
12/8/2023	16	60	10.0		141		0		30		100		4			13		310		166.8	
12/8/2023	17	60	10.4		139		0		30		100		4			13		310		167.2	
12/8/2023	18	60	10.7		138		0		39		100		3			13		310		167.7	
12/8/2023	19	60	10.6		140		1		38		99		3	4		14		310	310	167.4	167.3
12/8/2023	20	60	10.6		139		0		30		100		4			14		310		168.0	
12/8/2023	21	60	10.5		140		0		30		100		4			13		310		167.7	
12/8/2023	22	60	10.3		141		0		46		100		4			13		310		166.8	
12/8/2023	23	60	10.3		140		3		65		95		4	4		13	13	310	310	167.3	167.5

Average:  
Geometric Mean Average:

Limit:

140	1
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

98
≥ 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

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



Date 08-Dec-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	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	0	IC	5	IC	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	1	1	1	0	1	0
9	1	1	1	1	0	0	0	1	1	0	0
10	1	1	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	1	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

**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 08-Dec-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	2	2	1	1	1	1	1	1	1	1
1	2	1	2	2	1	1	2	1	1	1	1
2	1	2	1	1	1	1	1	1	1	1	1
3	1	1	1	2	2	2	1	2	2	2	1
4	2	1	2	1	1	1	1	1	1	1	1
5	1	1	1	1	2	1	2	2	2	1	1
6	0	IBC	6	IBC	1	2	2	2	2	2	2
7	1	2	2	2	1	1	1	1	1	1	1
8	2	2	2	2	1	2	2	2	2	2	1
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	1	2	2	2	2	2	2	2	1
14	2	2	2	2	2	1	1	1	2	1	1
15	2	2	2	2	2	1	1	1	1	1	1
16	1	1	2	2	2	2	2	1	1	2	1
17	1	1	1	1	1	1	1	1	1	1	1
18	1	1	1	1	1	1	2	2	1	1	1
19	1	1	1	2	2	2	2	2	2	2	2
20	2	2	1	1	1	1	2	2	2	1	1
21	2	2	2	2	1	2	1	1	1	2	1
22	1	2	2	2	2	2	1	2	2	2	1
23	2	2	2	2	2	2	2	2	1	2	1

**Status Flags**

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