



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



Date 5/24/23

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.
5/24/2023	0	60	9.7		134		0		37		99		4			13		309		167.1	
5/24/2023	1	60	9.7		136		10		65		85		4			13		310		164.7	
5/24/2023	2	60	9.5		134		4		49		92		5			13		309		166.4	
5/24/2023	3	60	9.7		135		1		43		97		4	4		12		310	309	165.3	165.8
5/24/2023	4	60	9.6		133		6		46		87		5			12		309		164.9	
5/24/2023	5	60	9.7		139		4		39		89		4			11		309		164.7	
5/24/2023	6	60	9.5		135		0		36		99		5			12		309		166.7	
5/24/2023	7	60	9.7		135		1		31		97		3	4		12	12	309	309	168.2	166.1
5/24/2023	8	60	10.0		136		6		39		85		4			12		309		165.4	
5/24/2023	9	60	9.9		137		1		37		96		4			12		310		164.2	
5/24/2023	10	60	9.9		141		17		69		75		4			12		309		166.1	
5/24/2023	11	60	9.5		139		10		58		84		4	4		13		310	310	167.4	165.8
5/24/2023	12	60	9.9		137		3		44		94		2			13		309		168.7	
5/24/2023	13	60	9.8		140		4		51		92		3			11		310		168.0	
5/24/2023	14	60	9.7		139		1		37		97		4			12		309		166.7	
5/24/2023	15	60	9.3		130		0		29		100		8	4		13	12	310	309	166.4	167.4
5/24/2023	16	60	9.6		129		0		31		100		6			13		309		163.8	
5/24/2023	17	60	9.6		134		5		54		91		6			12		309		166.3	
5/24/2023	18	60	9.6		135		17		68		76		5			13		310		167.5	
5/24/2023	19	60	9.5		139		25		112		77		6	6		12		310	309	168.2	166.5
5/24/2023	20	60	9.7		140		15		77		80		5			13		309		166.5	
5/24/2023	21	60	9.6		137		11		65		83		5			13		309		165.6	
5/24/2023	22	60	9.5		137		7		50		86		5			13		310		165.5	
5/24/2023	23	60	9.8		137		7		46		85		4	5		13	13	309	309	167.4	166.3

Average:  
Geometric Mean Average:

Limit:

136	3
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

95
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≥ 12 8-HR. Block Average

see above
≤ 345 °F 4-HR Block Average

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 5/24/23

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.
5/24/2023	0	60	10.7		138		2		14		89		1			12		310		166.1	
5/24/2023	1	60	10.6		141		1		14		91		2			12		310		166.9	
5/24/2023	2	60	10.7		138		4		21		138		2			11		310		166.5	
5/24/2023	3	60	10.8		139		10		34		72		2	2		12		310	310	166.6	166.5
5/24/2023	4	60	10.8		138		4		18		76		1			13		310		166.9	
5/24/2023	5	60	10.6		144		4		18		76		0			12		310		166.3	
5/24/2023	6	60	10.6		138		3		13		78		0			12		310		165.9	
5/24/2023	7	60	10.8		135		1		11		87		0	0		13	12	310	310	165.9	166.2
5/24/2023	8	60	10.7		143		1		11		88		0			12		310		166.9	
5/24/2023	9	60	10.6		138		5		20		74		0			12		310		167.0	
5/24/2023	10	60	10.8		139		15		38		61		0			12		310		166.8	
5/24/2023	11	60	10.6		138		5		21		75		1	0		12		310	310	167.0	166.9
5/24/2023	12	60	10.4		143		3		14		82		0			11		310		166.7	
5/24/2023	13	60	10.7		143		7		15		56		0			10		310		165.7	
5/24/2023	14	60	10.8		136		5		20		78		0			13		310		167.0	
5/24/2023	15	60	10.3		144		1		9		88		0	0		13	12	310	310	166.9	166.6
5/24/2023	16	60	10.4		138		5		24		79		0			13		310		165.4	
5/24/2023	17	60	10.5		142		14		43		68		1			14		310		166.6	
5/24/2023	18	60	10.5		138		7		24		71		1			13		310		166.8	
5/24/2023	19	60	10.7		142		17		37		53		0	0		13		310	310	165.6	166.1
5/24/2023	20	60	10.6		142		14		43		67		1			13		310		166.6	
5/24/2023	21	60	10.6		139		8		23		66		0			14		310		166.9	
5/24/2023	22	60	10.6		142		6		19		68		0			13		310		166.5	
5/24/2023	23	60	10.8		139		8		21		62		0	0		12	13	310	310	166.3	166.6

Average: Geometric Mean Average:	140	5	<b>OR</b>	77	see above	see above	see above	see above			
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 4-HR Block Average	ppmc	≥ 12 8-HR. Block Average	lb/hr	≤ 345 °F 4-HR Block Average	≤ 173 4-HR Block Average	klb/hr

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



Date 24-May-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	3	IC	5	IC	0	0	0	0	0	0	1
7	0	0	0	0	1	1	0	0	0	1	0
8	0	0	0	0	0	0	0	0	1	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	1	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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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 24-May-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	3	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	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

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