



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



Date 10/8/23

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.
10/8/2023	0	60	10.1		139		20		82		75		0			14		309		170.1	
10/8/2023	1	60	10.4		140		19		98		81		0			14		309		164.7	
10/8/2023	2	60	10.3		143		26		128		79		0			14		310		165.5	
10/8/2023	3	60	10.1		141		31		146		79		0	0		14		310	310	168.3	167.2
10/8/2023	4	60	10.4		138		25		136		82		0			14		309		165.5	
10/8/2023	5	60	10.1		137		28		114		75		0			14		310		170.0	
10/8/2023	6	60	10.5		143		28		134		79		0			14		311		166.0	
10/8/2023	7	60	10.4		140		21		117		82		0	0		14	14	310	310	166.8	167.1
10/8/2023	8	60	10.5		141		34		146		77		0			14		312		165.1	
10/8/2023	9	60	10.5		141		89		212		58		0			14		318		166.3	
10/8/2023	10	60	10.3		145		21		97		79		0			14		309		166.8	
10/8/2023	11	60	10.5		136		30		111		73		0	0		15		314	313	164.7	165.7
10/8/2023	12	60	10.4		142		40		145		73		0			15		312		167.0	
10/8/2023	13	60	10.5		140		37		142		74		0			15		325		165.9	
10/8/2023	14	60	10.4		142		11		74		85		6			15		307		166.2	
10/8/2023	15	60	10.6		140		14		67		80		0	2		15	14	309	313	166.7	166.4
10/8/2023	16	60	10.7		140		22		88		75		0			14		310		167.4	
10/8/2023	17	60	10.8		140		14		95		85		0			14		310		168.1	
10/8/2023	18	60	10.6		140		26		122		79		0			13		313		166.5	
10/8/2023	19	60	10.5		144		21		84		75		0	0		13		310	311	167.5	167.4
10/8/2023	20	60	10.3		140		10		38		73		0			13		309		168.3	
10/8/2023	21	60	10.5		140		14		44		67		0			13		309		164.7	
10/8/2023	22	60	10.3		143		13		36		63		0			13		310		168.6	
10/8/2023	23	60	10.5		139		12		42		71		0	0		13	14	308	309	167.1	167.2

Average:  
Geometric Mean Average:

Limit:

141	22
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

77
≥ 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 10/8/23

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.
10/8/2023	0	60	10.4		139		16		86		81		4			14		310		166.2	
10/8/2023	1	60	9.9		139		15		100		85		4			14		310		166.6	
10/8/2023	2	60	10.1		139		27		142		81		5			14		310		167.4	
10/8/2023	3	60	9.9		141		20		120		83		4	4		14		310	310	169.5	167.4
10/8/2023	4	60	10.3		137		25		151		83		11			13		310		165.1	
10/8/2023	5	60	10.0		138		18		105		83		4			14		310		166.2	
10/8/2023	6	60	10.1		140		25		118		79		6			13		310		168.0	
10/8/2023	7	60	10.2		142		23		114		80		4	6		12	13	310	310	166.3	166.4
10/8/2023	8	60	10.1		140		36		157		77		4			13		310		166.7	
10/8/2023	9	60	10.0		140		95		265		64		5			12		310		167.6	
10/8/2023	10	60	9.9		141		33		154		78		4			13		310		168.1	
10/8/2023	11	60	10.3		138		50		203		76		4	4		15		307	309	162.0	166.1
10/8/2023	12	60	10.0		139		36		161		78		4			14		311		165.0	
10/8/2023	13	60	10.1		139		38		168		78		5			14		310		167.4	
10/8/2023	14	60	10.2		140		22		86		75		4			14		310		166.2	
10/8/2023	15	60	10.0		139		17		83		79		3	4		14	14	310	310	168.2	166.7
10/8/2023	16	60	10.2		140		16		77		79		4			14		310		168.2	
10/8/2023	17	60	10.0		140		27		131		80		4			14		310		169.3	
10/8/2023	18	60	10.1		138		25		129		81		4			14		310		166.2	
10/8/2023	19	60	10.0		141		11		68		85		4	4		14		310	310	167.5	167.8
10/8/2023	20	60	10.1		140		2		40		95		3			14		310		167.3	
10/8/2023	21	60	10.1		140		6		46		86		4			14		310		169.1	
10/8/2023	22	60	10.2		139		20		78		74		4			14		310		165.1	
10/8/2023	23	60	10.3		140		26		95		72		5	4		13	14	310	310	166.8	167.1

Average: Geometric Mean Average:	139	21	<b>OR</b>	81	see above	see above	see above	see above
Limit:	≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 80% 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

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



Date 08-Oct-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	1	0	0	0	1	0	0
1	0	0	0	0	0	1	1	1	1	1	0
2	1	1	1	0	1	1	1	1	0	1	0
3	1	1	1	1	1	0	0	1	0	0	0
4	1	1	0	1	1	1	1	1	0	1	0
5	1	1	1	1	0	1	1	1	1	1	0
6	3	IC	5	IC	1	1	1	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	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	0	1	1	1	0	1	1	1	0
20	1	1	1	1	1	1	1	1	1	1	1
21	1	1	0	1	1	1	1	1	1	1	0
22	1	0	1	1	1	1	1	1	1	1	0
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 08-Oct-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	5	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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