



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



Date 8/21/23

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.
8/21/2023	0	60	10.1		135		13		76		82		0			9		309		169.2	
8/21/2023	1	60	10.6		138		8		60		87		1			16		309		159.4	
8/21/2023	2	60	10.0		143		7		63		89		0			18		311		163.9	
8/21/2023	3	60	10.3		138		16		77		78		0	0		15		309	309	164.9	164.3
8/21/2023	4	60	10.3		144		10		77		87		0			15		309		163.7	
8/21/2023	5	60	10.4		143		5		49		89		0			12		310		164.0	
8/21/2023	6	60	10.4		139		1		41		97		0			11		309		163.9	
8/21/2023	7	60	10.3		140		4		46		92		2	0		12	14	310	310	166.2	164.4
8/21/2023	8	60	10.5		140		7		49		86		0			12		309		164.7	
8/21/2023	9	60	10.5		142		4		46		92		1			10		309		165.7	
8/21/2023	10	60	10.9		140		3		40		93		1			13		309		161.1	
8/21/2023	11	60	11.0		141		7		61		88		1	1		17		310	309	161.8	163.3
8/21/2023	12	60	10.6		142		5		50		91		0			20		309		164.3	
8/21/2023	13	60	10.5		141		4		47		92		0			15		309		163.4	
8/21/2023	14	60	10.3		142		5		35		86		0			15		310		164.8	
8/21/2023	15	60	10.4		141		3		39		92		0	0		14	15	309	309	164.8	164.3
8/21/2023	16	60	10.4		142		2		41		96		0			12		310		165.5	
8/21/2023	17	60	10.2		141		12		62		80		0			10		310		168.4	
8/21/2023	18	60	10.5		140		12		56		78		0			16		309		166.4	
8/21/2023	19	60	10.3		140		2		41		94		0	0		13		309	309	166.7	166.7
8/21/2023	20	60	9.9		142		7		63		90		0			12		309		167.0	
8/21/2023	21	60	10.1		141		1		43		97		0			12		309		164.8	
8/21/2023	22	60	10.0		140		5		52		91		0			17		310		167.3	
8/21/2023	23	60	9.9		137		11		71		85		1	0		16	13	309	309	165.4	166.1

Average:  
Geometric Mean Average:

Limit:

141	5
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

90
≥ 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

**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 8/21/23

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.
8/21/2023	0	60	10.0		138		0		50		100		4			14		310		162.9	
8/21/2023	1	60	10.1		140		0		60		100		4			15		310		165.8	
8/21/2023	2	60	10.3		138		1		58		98		4			12		310		161.8	
8/21/2023	3	60	10.2		141		1		66		98		4	4		13		310	310	165.5	164.0
8/21/2023	4	60	10.1		143		0		55		100		4			13		310		164.8	
8/21/2023	5	60	10.1		140		0		38		100		4			13		310		165.3	
8/21/2023	6	60	10.1		140		0		34		99		5			12		310		166.3	
8/21/2023	7	60	10.7		142		0		41		100		7	5		15	13	310	310	152.4	162.2
8/21/2023	8	60	10.0		138		0		37		100		6			7		310		163.3	
8/21/2023	9	60	10.1		140		0		30		100		6			13		310		163.7	
8/21/2023	10	60	10.0		140		0		39		100		6			15		310		164.4	
8/21/2023	11	60	9.9		138		0		24		100		6	6		24		310	310	164.3	163.9
8/21/2023	12	60	10.0		141		0		34		100		5			17		310		165.0	
8/21/2023	13	60	10.0		140		1		46		99		5			24		310		164.1	
8/21/2023	14	60	10.1		139		10		61		83		8			19		310		165.6	
8/21/2023	15	60	10.0		140		0		27		100		6	6		18	17	310	310	163.7	164.6
8/21/2023	16	60	9.9		139		0		41		100		5			17		310		167.4	
8/21/2023	17	60	9.8		141		0		37		100		5			16		310		167.6	
8/21/2023	18	60	9.9		138		0		41		100		5			16		310		167.3	
8/21/2023	19	60	9.8		140		0		44		100		4	5		16		310	310	167.6	167.4
8/21/2023	20	60	10.0		139		0		45		100		4			17		310		167.8	
8/21/2023	21	60	10.1		139		0		35		100		5			17		310		167.5	
8/21/2023	22	60	10.0		141		0		43		100		4			14		310		168.0	
8/21/2023	23	60	10.0		139		0		44		100		4	4		16	16	310	310	167.3	167.6

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 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 21-Aug-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	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	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 21-Aug-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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 B - Bad                            M - Maintenance                      P - Purge                            E - Excluded                            \* - Shutdown