



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



Date 4/21/23

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.
4/21/2023	0	60	10.2		140		8		70		88		2			15		309		166.2	
4/21/2023	1	60	10.1		144		9		68		87		1			15		309		167.4	
4/21/2023	2	60	10.2		140		11		69		84		1			14		309		166.1	
4/21/2023	3	60	10.0		142		12		65		82		2	2		14		309	309	166.1	166.5
4/21/2023	4	60	10.1		141		6		59		90		2			14		310		167.2	
4/21/2023	5	60	10.2		141		9		63		86		2			14		309		166.2	
4/21/2023	6	60	10.4		141		11		64		83		2			15		310		166.9	
4/21/2023	7	60	10.5		141		8		70		89		2	2		14	15	309	309	166.4	166.7
4/21/2023	8	60	10.5		141		12		68		83		2			14		310		165.4	
4/21/2023	9	60	10.3		140		12		64		82		1			16		310		164.7	
4/21/2023	10	60	10.2		141		13		70		81		2			14		309		166.8	
4/21/2023	11	60	10.3		140		14		82		83		3	2		15		309	310	166.3	165.8
4/21/2023	12	60	10.0		140		15		80		81		3			15		310		166.9	
4/21/2023	13	60	10.3		141		17		107		84		2			16		309		166.2	
4/21/2023	14	60	10.0		141		11		81		86		2			13		309		166.3	
4/21/2023	15	60	9.8		136		3		73		96		3	3		13	15	309	309	167.1	166.6
4/21/2023	16	60	9.8		128		2		64		96		3			13		310		164.3	
4/21/2023	17	60	10.0		137		5		64		93		3			14		309		164.6	
4/21/2023	18	60	10.1		142		8		70		88		2			13		309		164.2	
4/21/2023	19	60	10.0		140		9		73		87		2	3		14		310	309	163.7	164.2
4/21/2023	20	60	10.1		137		20		121		84		3			13		309		163.9	
4/21/2023	21	60	10.0		140		26		144		82		3			13		309		164.5	
4/21/2023	22	60	9.9		140		20		119		83		3			13		309		166.5	
4/21/2023	23	60	10.0		141		20		119		83		2	3		13	13	310	309	166.1	165.2

Average:  
Geometric Mean Average:

Limit:

140	10
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

87
≥ 75% 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



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Date 4/21/23

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.
4/21/2023	0	60	11.2		140		1		22		96		1			14		310		166.5	
4/21/2023	1	60	11.2		138		1		18		95		1			14		310		166.5	
4/21/2023	2	60	11.2		141		1		19		94		0			14		310		166.7	
4/21/2023	3	60	11.1		140		1		15		92		1	1		13		310	310	166.7	166.6
4/21/2023	4	60	11.3		139		2		0		0		2			14		310		166.5	
4/21/2023	5	60	11.3		140		1		0	IBCT	0	IBCT	1			14		310		166.6	
4/21/2023	6	60	11.3		139		0		0	IBMT	0	IBMT	1			13		310		166.4	
4/21/2023	7	60	11.3		140		0		0	IBMT	0	IBMT	1	2		14	14	309	310	167.5	166.8
4/21/2023	8	60	11.5		140		0		35	IBCMT	99	IBCMT	1			14		310		165.3	
4/21/2023	9	60	11.3		140		0		26		99		1			14		310		166.6	
4/21/2023	10	60	11.2		139		0		28		100		1			13		310		167.0	
4/21/2023	11	60	11.4		141		3		42		92		2	1		13		310	310	166.3	166.3
4/21/2023	12	60	11.1		139		5		43		89		1			14		310		166.4	
4/21/2023	13	60	11.2		139		6		60		89		1			14		310		166.6	
4/21/2023	14	60	11.1		142		3		44		93		1			14		310		166.6	
4/21/2023	15	60	11.0		139		0		36		99		0	1		14	14	310	310	166.8	166.6
4/21/2023	16	60	10.7		139		0		24		100		1			14		310		166.4	
4/21/2023	17	60	10.8		140		0		21		100		1			18		310		166.1	
4/21/2023	18	60	10.8		139		0		20		100		1			13		310		166.9	
4/21/2023	19	60	10.9		140		0		26		100		1	1		12		310	310	167.0	166.6
4/21/2023	20	60	11.1		139		5		48		90		1			14		310		165.4	
4/21/2023	21	60	11.1		141		18		84		79		2			14		310		166.2	
4/21/2023	22	60	11.1		140		11		71		84		1			14		310		166.7	
4/21/2023	23	60	11.1		138		7		49		87		1	1		13	14	310	310	166.5	166.2

Average:  
Geometric Mean Average:

Limit:

140	1
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

97
≥ 75% Removal Efficiency

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≤ 69 4-HR Block Average

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



Date 21-Apr-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	2	IC	5	IC	1	1	1	1	1	1	1
7	1		1		1	1	1	1	1	1	1
8	1		1		1	1	1	1	1	1	1
9	1		1		1	1	1	1	1	1	1
10	1	IM	1	IM	1	1	1	1	1	1	1
11	1		1		1	1	1	1	1	1	1
12	1		1		1	1	1	1	1	1	1
13	1		1		1	1	1	1	1	1	1
14	1		1		1	1	1	1	1	1	1
15	1		1		1	1	1	1	1	1	1
16	1		1		1	1	1	1	1	1	1
17	1		1		1	1	1	1	1	1	1
18	1		1		1	1	1	1	1	1	1
19	1		1		1	1	1	1	1	1	1
20	1		1		1	1	1	1	1	1	1
21	1		1		1	1	1	1	1	1	1
22	1		1		1	1	1	1	1	1	1
23	1		1		1	1	1	1	1	1	1

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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 21-Apr-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	3	IBC	4	IBC	0	0	0	0	0	0	1
7	0		0		0	0	0	0	0	0	0
8	0		0		0	0	0	0	0	0	0
9	0		0		0	0	0	0	0	0	0
10	0	IM	0	IM	0	0	0	0	0	0	0
11	0		0		0	0	0	0	0	0	0
12	0		0		0	0	0	0	0	0	0
13	0		0		0	0	0	0	0	0	0
14	0		0		0	0	0	0	0	0	0
15	0		0		0	0	0	0	0	0	0
16	0		0		0	0	0	0	0	0	0
17	0		0		0	0	0	0	0	0	0
18	0		0		0	0	0	0	0	0	0
19	0		0		0	0	0	0	0	0	0
20	0		0		0	0	0	0	0	0	0
21	0		0		0	0	0	0	0	0	0
22	0		0		0	0	0	0	0	0	0
23	0		0		0	0	0	0	0	0	0

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