



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



Date 8/29/23

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.
8/29/2023	0	60	10.3		141		22		95		77		0			14		306		168.5	
8/29/2023	1	60	10.3		141		12		87		86		0			13		297		167.8	
8/29/2023	2	60	10.2		143		2		63		97		0			14		292		167.7	
8/29/2023	3	60	10.3		139		12		85		86		50	13		13		296	298	167.0	167.8
8/29/2023	4	60	10.1		139		6		51		89		0			14		302		168.7	
8/29/2023	5	60	10.2		141		5		48		90		0			13		300		165.6	
8/29/2023	6	60	10.1		141		5		40		87		0			14		305		166.6	
8/29/2023	7	60	10.3		140		12		81		85		0	0		13	14	305	303	166.2	166.8
8/29/2023	8	60	10.0		143		3		81		96		6			13		301		168.4	
8/29/2023	9	60	10.2		140		1		86		99		0			13		296		166.9	
8/29/2023	10	60	10.2		139		1		75		98		0			14		294		166.7	
8/29/2023	11	60	10.2		142		4		71		94		0	2		13		297	297	167.6	167.4
8/29/2023	12	60	10.4		138		0		53		99		0			14		298		162.7	
8/29/2023	13	60	10.2		142		5		76		93		7			13		301		163.7	
8/29/2023	14	60	10.3		142		8		67		88		43			14		310		167.2	
8/29/2023	15	60	10.0		143		4		74		94		2	13		14	14	309	304	167.6	165.3
8/29/2023	16	60	9.9		135		10		74		86		3			13		309		167.0	
8/29/2023	17	60	9.9		144		9		64		87		2			13		310		166.7	
8/29/2023	18	60	10.0		141		5		57		92		0			13		309		163.9	
8/29/2023	19	60	10.0		140		15		70		78		0	1		14		310	310	166.0	165.9
8/29/2023	20	60	9.6		142		13		71		82		0			13		309		169.9	
8/29/2023	21	60	9.8		137		8		62		87		1			13		309		167.4	
8/29/2023	22	60	9.9		144		12		65		82		0			13		310		164.9	
8/29/2023	23	60	9.8		141		6		58		89		0	0		13	13	309	309	166.9	167.3

Average:  
Geometric Mean Average:

Limit:

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

OR

92
≥ 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 8/29/23

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.
8/29/2023	0	60	10.1		139		0		50		100		4			14		311		168.0	
8/29/2023	1	60	10.0		140		3		62		95		70			14		308		166.3	
8/29/2023	2	60	9.9		140		2		60		96		5			14		312		168.1	
8/29/2023	3	60	10.1		139		1		48		99		5	21		14		315	311	166.9	167.3
8/29/2023	4	60	10.1		138		0		38		100		5			14		311		163.5	
8/29/2023	5	60	9.8		141		0		30		100		4			14		312		166.4	
8/29/2023	6	60	9.8		139		0		28		100		5			14		313		166.7	
8/29/2023	7	60	9.9		139		0		65		100		5	5		14	14	305	310	166.0	165.6
8/29/2023	8	60	9.9		140		1		84		99		5			14		301		166.8	
8/29/2023	9	60	9.8		140		0		70		100		3			14		305		168.2	
8/29/2023	10	60	9.9		140		0		68		100		4			14		305		165.6	
8/29/2023	11	60	9.7		141		0		52		100		4	4		14		309	305	166.9	166.9
8/29/2023	12	60	10.1		137		0		28		100		5			14		312		158.5	
8/29/2023	13	60	9.6		142		0		43		100		4			14		307		164.7	
8/29/2023	14	60	9.6		139		1		71		99		3			14		310		168.6	
8/29/2023	15	60	9.8		142		0		50		100		4	4		14	14	310	310	166.0	164.5
8/29/2023	16	60	9.6		138		0		52		100		5			14		311		163.7	
8/29/2023	17	60	9.7		139		1		67		98		4			14		309		167.9	
8/29/2023	18	60	9.8		140		1		61		99		4			14		310		165.9	
8/29/2023	19	60	9.8		138		7		89		93		6	5		13		310	310	167.9	166.4
8/29/2023	20	60	9.9		141		4		80		95		5			14		310		169.3	
8/29/2023	21	60	9.9		138		1		58		99		5			13		310		167.5	
8/29/2023	22	60	10.1		140		3		71		95		5			15		310		167.6	
8/29/2023	23	60	10.4		141		2		42		96		6	5		13	14	310	310	163.4	166.9

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

**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 OPACITY REPORT



Date 29-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 29-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

**Status Flags**

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