



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



Date 1/30/24

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.
1/30/2024	0	60	10.1		139		14		18		23		0			13		309		167.6	
1/30/2024	1	60	10.2		142		14		19		27		0			13		310		167.2	
1/30/2024	2	60	10.2		141		10		17		42		0			13		309		163.7	
1/30/2024	3	60	10.3		141		16		18		8		0	0		13		310	309	167.7	166.5
1/30/2024	4	60	10.3		140		16		23		30		0			13		309		167.3	
1/30/2024	5	60	10.3		141		20		20		0		0			13		309		167.2	
1/30/2024	6	60	10.4		140		18		15		0		0			13		309		163.9	
1/30/2024	7	60	10.2		140		13		14		6		1	0		13	13	310	310	163.9	165.6
1/30/2024	8	60	10.3		143		15		15		0		1			13		309		167.8	
1/30/2024	9	60	10.4		140		14		14		0		1			13		309		167.1	
1/30/2024	10	60	10.5		140		13		17		21		1			13		309		165.9	
1/30/2024	11	60	10.3		141		14		17		15		2	1		13		309	309	164.2	166.3
1/30/2024	12	60	10.4		140		14		18		21		1			13		309		166.3	
1/30/2024	13	60	10.2		141		16		15		0		1			13		310		165.5	
1/30/2024	14	60	10.3		142		11		10		0		1			13		309		164.5	
1/30/2024	15	60	10.3		140		9		11		21		2	1		13	13	309	309	160.2	164.1
1/30/2024	16	60	10.3		141		6		10		34		2			13		310		161.8	
1/30/2024	17	60	10.2		142		6		9		32		1			13		309		165.3	
1/30/2024	18	60	10.3		142		14		14		0		1			13		309		166.9	
1/30/2024	19	60	10.3		139		11		13		17		1	1		13		309	310	167.4	165.4
1/30/2024	20	60	10.4		141		14		15		7		1			13		310		168.0	
1/30/2024	21	53	10.5		142		9		14		37		1			13		309		166.5	
1/30/2024	22	60	10.6		139		20		26		23		0			13		309		167.7	
1/30/2024	23	60	10.5		142		16		23		34		0	0		13	13	309	309	164.4	166.6

Average:  
Geometric Mean Average:

Limit:

141	13
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

16
≥ 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 1/30/24

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.
1/30/2024	0	60	10.3		139		4		11		68		6			13		310		167.5	
1/30/2024	1	60	10.3		140		6		11		42		6			13		310		167.2	
1/30/2024	2	60	10.3		138		5		12		61		11			13		310		167.9	
1/30/2024	3	60	10.5		141		3		10		73		7	7		13		310	310	165.6	167.1
1/30/2024	4	60	10.3		139		10		13		28		6			14		310		167.2	
1/30/2024	5	60	10.3		139		9		19		52		6			13		310		168.1	
1/30/2024	6	60	10.5		140		7		9		26		6			14		310		163.6	
1/30/2024	7	60	10.2		136		4		13		71		8	7		14	14	310	310	166.2	166.3
1/30/2024	8	60	10.3		141		6		5		0		6			13		310		167.2	
1/30/2024	9	60	10.2		139		3		2		0		9			12		310		165.3	
1/30/2024	10	60	10.1		139		15		2		0		8			13		310		167.6	
1/30/2024	11	60	9.7		140		5		2	IBM	0	IBM	7	7		13		310	310	167.4	166.9
1/30/2024	12	60	10.1		139		11		2	IBM	0	IBM	6			14		310		167.7	
1/30/2024	13	60	10.2		140		19		4	IBM	0	IBM	7			16		310		166.8	
1/30/2024	14	60	10.0		139		10		15		30		8			16		310		167.0	
1/30/2024	15	60	10.1		140		9		22		60		8	7		16	14	310	310	165.9	166.9
1/30/2024	16	60	10.3		138		2		21		91		8			16		310		166.1	
1/30/2024	17	60	10.2		139		2		26		91		7			15		310		165.8	
1/30/2024	18	60	9.6		139		3		24		89		5			15		310		167.8	
1/30/2024	19	60	9.9		140		1		24		98		5	6		15		310	310	167.7	166.8
1/30/2024	20	60	10.0		139		4		28		85		5			16		311		167.0	
1/30/2024	21	60	10.1		140		9		33		73		5			15		310		168.3	
1/30/2024	22	60	10.2		138		22		43		49		5			15		310		167.5	
1/30/2024	23	60	10.2		139		21		41		49		5	5		15	15	310	310	169.4	168.0

Average:  
Geometric Mean Average:

Limit:

139	6
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

62
≥ 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 30-Jan-2024

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	0	IC	4	IC	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	I	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



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



Date 30-Jan-2024

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	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	1
1	1	IB	1		1		1	IB	1	IB	1	IB	1		1		1		1	IB	1	1
2	1		1	IB	1		1	IB	1	IB	1	IB	1		1	IB	1	IB	1	IB	1	1
3	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	1
4	1		1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	1
5	1	IB	1		1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	1
6	1	IBC	7	IBC	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	2
7	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	1
8	1	IB	1		1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	1
9	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1		1	IB	1	IB	1	1
10	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1		1	1
11	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1		1	IB	1	IB	1	1
12	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1		1	IB	1	1
13	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	1
14	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1		1	IB	1	1
15	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1	IB	1		1	IB	1		1	1
16	1	IB	1	IB	1	IB	1		1		1		1		1	IB	1	IB	1	IB	1	1
17	1		1		1	IB	1	IB	1	IB	1		1		1		1	IB	1		1	1
18	1	IB	1		1		1		1		1		1		1		1		1	IB	1	1
19	1	IB	1		1		1	IB	1	IB	1	IB	1		1		1	IB	1		1	1
20	1		1		1	IB	1		1		1		1	IB	1		1		1		1	1
21	1		1		1	IB	1		1		1		1		1		1		1		1	1
22	1		1		1		1	IB	1		1		1	IB	1		1		1		1	1
23	1	IB	1	IB	1		1		1		1		1		1	IB	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