



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



Date 5/24/22

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.
5/24/2022	0	60	10.2		192		9		51		81		8			15		300		158.2	
5/24/2022	1	60	10.3		196		13		50		74		6			15		300		165.1	
5/24/2022	2	60	10.2		194		11		46		77		6			15		299		165.0	
5/24/2022	3	60	10.3		198		25		68		64		7	7		15		299	299	167.2	163.9
5/24/2022	4	60	10.1		194		14		51		73		6			15		299		166.2	
5/24/2022	5	60	10.3		198		19		27		28		6			15		299		162.5	
5/24/2022	6	60	10.4		197		18		26		30		6			15		299		163.1	
5/24/2022	7	60	10.3		196		16		27		40		6	6		15	15	299	299	164.7	164.1
5/24/2022	8	60	10.1		195		15		36		58		6			15		300		166.8	
5/24/2022	9	60	10.5		198		15		32		53		5			15		299		166.5	
5/24/2022	10	60	10.3		195		12		31		62		7			15		300		166.5	
5/24/2022	11	60	10.8		186		8		26		67		6	6		14		299	299	165.2	166.3
5/24/2022	12	60	10.4		184		4		31		87		51			14		299		164.6	
5/24/2022	13	60	9.9		195		3		28		91		6			14		300		167.1	
5/24/2022	14	60	10.1		198		8		39		79		6			14		299		165.2	
5/24/2022	15	60	10.1		195		44		99		56		106	42		14	14	299	299	164.8	165.4
5/24/2022	16	60	10.1		192		3		36		92		7			14		299		159.0	
5/24/2022	17	60	9.9		187		5		39		88		6			14		299		166.0	
5/24/2022	18	60	10.0		185		5		41		88		6			14		300		162.6	
5/24/2022	19	60	10.1		196		9		47		81		5	6		14		299	299	163.9	162.9
5/24/2022	20	60	9.9		193		13		44		70		5			14		300		165.5	
5/24/2022	21	60	10.1		195		22		39		45		5			14		299		166.8	
5/24/2022	22	60	10.0		193		19		36		47		4			14		299		166.7	
5/24/2022	23	60	10.0		190		14		40		65		5	5		14	14	299	299	165.1	166.0

Average:  
Geometric Mean Average:

Limit:

193	11
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

72
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≤ 12 8-HR. Block Average

see above
≤ 345 °F 4-HR Block Average

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 5/24/22

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 Hr Block
5/24/2022	0																					
5/24/2022	1																					
5/24/2022	2																					
5/24/2022	3																					
5/24/2022	4																					
5/24/2022	5																					
5/24/2022	6																					
5/24/2022	7																					
5/24/2022	8																					
5/24/2022	9																					
5/24/2022	10	44	10.3		198		13		0	IBF	0	IBF	7			15		300		167.5		
5/24/2022	11	60	10.8		186		8		0	IBF	0	IBF	6	7		14		299	299	165.2	166.3	
5/24/2022	12	60	10.4		184		4		0	IBF	0	IBF	51			14		299		164.6		
5/24/2022	13	52	10.0		194		3		6	IBF	44	IBF	5			15		300		166.5		
5/24/2022	14	50	9.9	IBMF	171	IBMF	3	IBMF	6	IBM	52	IBMF	6	IBMF		20		297		167.1		
5/24/2022	15	0	20.9	IBF	0	IBF	5	IBF					0	IBF	28	0	16	73	299	0.0	166.0	
5/24/2022	16	0	20.9	IF	0	IF	7	IF					0	IF		0		74		0.0		
5/24/2022	17	0	20.9	IF	0	IF	7	IF					0	IF		0		73		0.0		
5/24/2022	18	0	20.9	IF	0	IF	6	IF					0	IF		0		72		0.0		
5/24/2022	19	0	20.9	IF	0	IF	6	IF					0	IF	0	IF		71	72	0.0	0.0	
5/24/2022	20	0	20.9	IF	0	IF	6	IF					0	IF		0		69		0.0		
5/24/2022	21	0	20.9	IF	0	IF	6	IF					0	IF		0		68		0.0		
5/24/2022	22	0	20.9	IF	0	IF	6	IF					0	IF		0		66		0.0		
5/24/2022	23	0	20.9	IF	0	IF	6	IF					0	IF	0	IF	0	0	67	67	0.0	0.0

Average:	<b>190</b>	<b>6</b>	<b>0</b>			
Geometric Mean Average:						
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean	OR	≥ 75% 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 OPACITY REPORT



Date 24-May-2022

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

**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 24-May-2022

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	0
1	0		0		0		0		0		0		0		0		0		0		0	0
2	0		0		0		0		0		0		0		0		0		0		0	0
3	0		0		0		0		0		0		0		0		0		0		0	0
4	0		0		0		0		0		0		0		0		0		0		0	0
5	0		0		0		0		0		0		0		0		0		0		0	0
6	0		0		0		0		0		0		0		0		0		0		0	0
7	0		0		0		0		0		0		0		0		0		0		0	0
8	0		0		0		0		0		0		0		0		0		0		0	0
9	0		0		0		0		0		0		0		0		0		0		0	0
10	0		0		2	I	2		2		2		2		2		2		2		2	2
11	2		2		2		2		2		2		2		2		2		2		2	2
12	2		2		2		2		2		2		2		2		2		2		2	2
13	2		2		2		2		2		2		2	I	0		2	I	2		2	2
14	2		2		2		2		2		2		2		2		2	I	2		2	IF
15	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF
16	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF
17	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF
18	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF
19	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF
20	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF
21	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF
22	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF
23	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF

**Status Flags**

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