



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



Date 5/25/22

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.
5/25/2022	0	60	10.1		186		14		35		59		5			14		299		164.5	
5/25/2022	1	60	10.1		182		11		34		66		4			14		299		166.5	
5/25/2022	2	60	10.2		183		6		27		79		3			14		300		165.5	
5/25/2022	3	60	10.0		185		5		30		82		3	4		14		299	299	166.3	165.7
5/25/2022	4	60	10.0		178		5		32		85		4			14		299		162.6	
5/25/2022	5	60	9.9		179		4		19		80		5			14		300		163.8	
5/25/2022	6	60	9.7		185		5		22		77		5			14		299		165.7	
5/25/2022	7	60	9.8		179		5		24		81		6	5		14	14	299	299	164.7	164.2
5/25/2022	8	60	9.7		184		5		25		79		5			14		299		166.6	
5/25/2022	9	60	10.2		177		11		28		61		6			14		299		162.4	
5/25/2022	10	60	9.9		183		13		29		55		6			14		299		166.4	
5/25/2022	11	60	10.0		178		14		33		58		6	6		14		299	299	168.3	165.9
5/25/2022	12	60	10.3		188		27		38		28		5			14		299		166.6	
5/25/2022	13	60	10.3		191		17		38		54		6			14		299		165.7	
5/25/2022	14	60	10.5		195		27		38		29		6			14		300		166.1	
5/25/2022	15	60	10.3		196		19		40		53		5	5		14	14	299	299	166.6	166.3
5/25/2022	16	60	10.3		199		11		38		71		5			14		299		167.3	
5/25/2022	17	60	10.3		197		9		43		78		4			14		300		167.2	
5/25/2022	18	60	10.3		199		7		46		84		4			14		299		166.3	
5/25/2022	19	60	10.2		196		17		58		70		5	4		13		299	299	167.6	167.1
5/25/2022	20	60	10.1		195		8		47		84		5			14		300		166.6	
5/25/2022	21	60	10.1		199		6		47		86		4			14		299		168.8	
5/25/2022	22	60	10.1		193		5		50		89		5			14		299		167.7	
5/25/2022	23	60	10.1		191		9		58		84		5	5		14	14	300	299	167.0	167.5

Average: Geometric Mean Average:	188	9	<b>OR</b>	74	see above	see above	see above	see above
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 ppmc 4-HR Block Average	≤ 12 lb/hr 8-HR. Block Average	≤ 345 °F 4-HR Block Average	≤ 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 5/25/22

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.
5/25/2022	0	0	20.9	IF	0	IF	7	IF					0	IF		0		72		0.0	
5/25/2022	1	0	20.9	IF	0	IF	7	IF					0	IF		0		73		0.0	
5/25/2022	2	0	20.9	IF	0	IF	7	IF					0	IF		0		72		0.0	
5/25/2022	3	5	20.1	ICF	0	ICF	7	ICF					0	ICF	0	0		71	72	0.0	0.0
5/25/2022	4	13	17.2	IBCF	77	IBCF	60	IBCF					528	IBCF		0		71		0.0	
5/25/2022	5	0	20.9	IF	5	IF	7	IF					0	IF		0		69		0.0	
5/25/2022	6	0	20.9	IF	5	IF	7	IF					0	IF		0		69		0.0	
5/25/2022	7	15	17.2	IF	90	IF	21	IF					43	IF	143	0	0	87	74	0.0	0.0
5/25/2022	8	60	16.9		132		8						29			0		114		1.3	
5/25/2022	9	60	16.1		118		6		0	IBF	0	IBF	11			11		137		8.6	
5/25/2022	10	60	14.1		114		4		0		0		5			13		180		29.3	
5/25/2022	11	60	13.3		107		3		0		0		1	11		14		218	162	45.5	21.2
5/25/2022	12	60	12.5		96		3		0		0		0			15		238		57.9	
5/25/2022	13	60	12.0		106		3		0		0		1			16		263		66.6	
5/25/2022	14	60	9.9		183		4		24		82		10			17		303		157.0	
5/25/2022	15	60	10.1		198		7		30		75		6	4		13	12	305	277	166.1	111.9
5/25/2022	16	60	10.4		196		3		13		80		2			14		308		166.1	
5/25/2022	17	60	10.5		198		3		16		84		4			12		311		166.6	
5/25/2022	18	60	10.6		197		2		25		90		3			16		306		167.1	
5/25/2022	19	60	10.5		197		3		31		92		3	3		18		310	309	167.8	166.9
5/25/2022	20	60	10.6		198		2		15		87		3			17		307		167.3	
5/25/2022	21	60	10.4		195		2		19		91		3			18		309		167.7	
5/25/2022	22	60	10.6		197		2		17		90		2			19		301		166.9	
5/25/2022	23	60	10.7		197		2		16		90		2	2		15	16	304	305	167.6	167.4

Average:  
Geometric Mean Average:

Limit:

164	3
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

42
≥ 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 25-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 25-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	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
1	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
2	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
3	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
4	1		1		1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
5	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
6	2	BCF	23	BCF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	3
7	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	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		0		1		1		1		0		0
18	1		1		1		1		1		1		0		1		0		1		0
19	1		1		1		1		1		1		1		1		1		1		1
20	1		1		1		1		1		1		1		1		0		1		0
21	0		1		0		1		1		1		1		1		1		1		0
22	1		1		0		0		0		1		1		1		1		1		0
23	1		0		0		1		0		0		1		0		1		0		0

**Status Flags**

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