



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



Date 4/7/22

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.
4/7/2022	0	60	10.0		171		2		36		93		5			14		301		169.8	
4/7/2022	1	60	10.3		190		6		34		81		5			14		301		165.5	
4/7/2022	2	60	10.2		196		15		34		54		4			14		315		169.0	
4/7/2022	3	60	10.2		196		12		34		65		5	5		14		314	308	169.1	168.3
4/7/2022	4	60	10.2		195		6		33		82		5			15		304		166.8	
4/7/2022	5	60	10.2		197		14		32		57		6			15		304		167.6	
4/7/2022	6	60	10.1		195		22		36		38		6			15		314		170.2	
4/7/2022	7	60	10.2		187		7		27		75		7	6		15	15	311	308	166.7	167.8
4/7/2022	8	60	10.2		174		6		29		79		5			15		295		167.9	
4/7/2022	9	60	10.6		189		22		31		29		5			15		306		165.4	
4/7/2022	10	60	10.6		195		7		12		43		4			13		303		167.1	
4/7/2022	11	60	10.3		189		10		20		47		5	5		14		299	301	166.3	166.7
4/7/2022	12	60	10.1		190		18		19		4		6			14		318		167.1	
4/7/2022	13	60	9.9		190		19		25		24		6			14		319		169.7	
4/7/2022	14	60	9.8		194		16		37		57		7			13		309		169.0	
4/7/2022	15	60	9.9		192		10		24		59		6	6		14	14	314	315	167.1	168.2
4/7/2022	16	60	10.1		186		14		33		56		5			13		316		167.4	
4/7/2022	17	60	10.1		187		17		60		72		7			13		315		167.2	
4/7/2022	18	60	10.2		196		9		36		76		5			13		301		165.6	
4/7/2022	19	60	10.2		196		34		114		70		6	6		13		309	310	166.8	166.8
4/7/2022	20	60	10.1		195		27		92		70		6			13		310		166.1	
4/7/2022	21	60	9.8		193		21		58		65		5			13		312		166.7	
4/7/2022	22	60	9.8		192		16		35		55		5			13		317		167.7	
4/7/2022	23	60	9.8		184		15		53		71		6	5		13	13	310	312	166.4	166.7

Average:  
Geometric Mean Average:

Limit:

190	12	OR	64
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

see above	see above	see above
≤ 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 4/7/22

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.
4/7/2022	0	60	10.3		191		1		54		98		2			10		310		167.2	
4/7/2022	1	60	10.3		196		2		57		97		2			11		310		167.3	
4/7/2022	2	60	10.3		187		2		57		97		1			12		310		167.5	
4/7/2022	3	60	10.3		197		1		55		98		3	2		12		310	310	166.3	167.1
4/7/2022	4	60	10.0		182		3		55		95		3			21		310		167.5	
4/7/2022	5	60	10.4		190		4		82		96		1			17		310		168.7	
4/7/2022	6	60	10.3		191		5		-1177		0		2			17		310		166.7	
4/7/2022	7	60	10.2		194		3		-1173		0		2	2		16	15	310	310	166.8	167.4
4/7/2022	8	60	10.4		186		3		56		95		2			14		311		168.0	
4/7/2022	9	60	10.4		188		9		77		88		3			13		310		167.7	
4/7/2022	10	60	10.3		188		3		48		95		2			13		310		168.3	
4/7/2022	11	60	10.2		196		4		60		94		3	3		14		310	310	169.0	168.3
4/7/2022	12	60	10.3		196		1		41		97		2			14		310		168.4	
4/7/2022	13	60	10.2		190		9		77		88		2			15		310		169.2	
4/7/2022	14	60	10.1		196		17		92		82		2			12		310		168.6	
4/7/2022	15	60	9.9		196		1		38		99		2	2		14	14	310	310	168.9	168.8
4/7/2022	16	60	9.9		194		1		48		98		2			15		310		168.5	
4/7/2022	17	60	9.8		189		3		43		93		2			14		310		167.8	
4/7/2022	18	60	9.8		195		1		29		97		2			13		310		167.9	
4/7/2022	19	60	9.9		197		37		153		75		3	2		13		310	310	167.2	167.9
4/7/2022	20	60	9.7		193		17		95		82		2			14		310		167.3	
4/7/2022	21	60	9.7		188		9		75		88		2			14		310		167.1	
4/7/2022	22	60	9.6		190		3		54		94		2			14		310		168.3	
4/7/2022	23	60	9.8		196		5		65		93		2	2		16	14	310	310	167.2	167.5

Average:  
Geometric Mean Average:

Limit:

192	3
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

90
≥ 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 07-Apr-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	2
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 07-Apr-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	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	IBC	6	IBC	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