



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



Date 5/17/22

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.
5/17/2022	0	60	9.7		158		14		30		52		8			13		314		163.3	
5/17/2022	1	60	9.7		157		4		20		78		8			13		319		165.9	
5/17/2022	2	60	9.7		153		2		22		91		8			14		309		165.5	
5/17/2022	3	60	9.8		159		2		24		91		8	8		14		308	313	164.1	164.7
5/17/2022	4	60	9.7		153		2		24		93		7			15		306		164.1	
5/17/2022	5	60	9.7		157		4		28		84		8			14		311		166.9	
5/17/2022	6	60	9.8		162		1		19		94		9			13		307		163.7	
5/17/2022	7	60	9.7		154		1		16		94		10	8		14	14	312	309	166.7	165.3
5/17/2022	8	60	9.9		166		2		23		92		10			14		313		162.8	
5/17/2022	9	60	10.1		155		3		26		88		9			14		309		166.2	
5/17/2022	10	60	10.3		161		4		20		80		9			13		309		163.3	
5/17/2022	11	60	10.1		157		17		51		66		10	10		14		311	311	165.5	164.5
5/17/2022	12	60	10.0		149		6		25		75		9			13		310		165.3	
5/17/2022	13	60	9.9		159		1		18		92		12			14		313		165.4	
5/17/2022	14	60	9.9		165		5		50		89		10			14		313		167.9	
5/17/2022	15	60	9.6		167		5		55		91		9	10		14	14	310	312	167.8	166.6
5/17/2022	16	60	9.9		162		0		32		99		10			13		305		165.1	
5/17/2022	17	60	9.6		160		0		35		99		9			14		305		167.4	
5/17/2022	18	60	10.0		169		0		30		99		9			14		307		165.9	
5/17/2022	19	60	9.9		167		1		35		96		10	9		14		312	307	166.6	166.3
5/17/2022	20	60	10.0		160		2		46		96		9			14		309		164.4	
5/17/2022	21	60	10.0		164		1		41		97		9			13		307		164.6	
5/17/2022	22	53	11.5		197		4		38		90		90			14		311		149.5	
5/17/2022	23	0	20.6	IF	88	IF	7	IF	180	IBF	96	IBF	138	IF	36	10	14	265	309	34.3	159.5

Average:  
Geometric Mean Average:

Limit:

161	2
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

92
≥ 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 5/17/22

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.
5/17/2022	0	60	9.8		190		2		23		92		2			13		310		164.4	
5/17/2022	1	60	9.7		191		3		30		89		3			14		310		164.0	
5/17/2022	2	60	9.7		193		5		29		81		3			15		310		165.3	
5/17/2022	3	60	9.6		194		4		28		84		2	2		14		310	310	164.2	164.4
5/17/2022	4	60	9.8		191		2		27		93		4			14		310		164.7	
5/17/2022	5	60	9.7		194		2		28		93		3			13		310		164.5	
5/17/2022	6	60	10.0		195		2		24		93		4			15		310		163.6	
5/17/2022	7	60	9.6		196		1		23		95		4	4		14	14	310	310	165.7	164.6
5/17/2022	8	60	10.2		195		14		34		60		4			14		310		164.7	
5/17/2022	9	60	10.0		190		3		17		81		4			11		310		165.8	
5/17/2022	10	60	10.1		192		2		26		92		3			15		310		165.1	
5/17/2022	11	60	9.5		194		3		36		91		4	4		15		310	310	165.6	165.3
5/17/2022	12	60	9.5		188		0		4		100		3			16		310		165.5	
5/17/2022	13	60	9.9		192		0		21		100		4			14		310		164.8	
5/17/2022	14	60	9.9		187		0		29		100		6			14		310		166.3	
5/17/2022	15	60	9.7		183		9		101		91		4	4		14	14	310	310	163.4	165.0
5/17/2022	16	60	9.5		187		1		52		99		4			15		310		166.0	
5/17/2022	17	60	9.3		189		0		37		100		2			14		310		166.2	
5/17/2022	18	60	9.4		191		0		40		100		2			14		310		165.4	
5/17/2022	19	60	9.4		193		0		37		100		3	3		15		310	310	165.5	165.8
5/17/2022	20	60	9.5		191		0		41		100		2			14		310		164.8	
5/17/2022	21	60	10.0		194		2		65		96		2			14		310		165.0	
5/17/2022	22	60	9.7		192		3		66		96		3			14		310		166.7	
5/17/2022	23	60	10.0		220		0		50		99		2	2		14	14	310	310	164.3	165.2

Average: Geometric Mean Average:	193	1	<b>OR</b>	98	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 OPACITY REPORT



Date 17-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	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	IF	2	IF
23	2	IF	2	IF	2	IF	2	IF	2	IF	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 17-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
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