



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



Date 7/11/22

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.
7/11/2022	0	60	9.7		186		17		62		73		3			13		309		167.1	
7/11/2022	1	60	9.8		191		13		47		73		2			14		310		164.2	
7/11/2022	2	60	9.6		187		8		40		81		3			13		309		166.3	
7/11/2022	3	60	9.7		194		5		33		85		3	3		13		309	309	164.5	165.5
7/11/2022	4	60	9.7		177		15		59		74		4			13		310		162.9	
7/11/2022	5	60	9.5		190		17		62		72		3			13		309		167.4	
7/11/2022	6	60	9.7		185		12		50		75		4			13		309		162.2	
7/11/2022	7	60	9.7		184		7		42		82		5	4		13	13	310	309	164.5	164.2
7/11/2022	8	60	9.9		177		4		36		89		4			13		309		162.8	
7/11/2022	9	60	10.0		195		22		80		73		5			13		309		164.3	
7/11/2022	10	60	10.3		196		14		51		72		3			13		309		166.3	
7/11/2022	11	60	10.0		193		17		76		78		6	5		13		310	309	163.8	164.3
7/11/2022	12	60	10.1		196		20		41		52		4			14		309		165.9	
7/11/2022	13	60	9.8		188		15		34		56		6			13		310		165.2	
7/11/2022	14	60	9.8		191		14		27		46		5			13		309		165.2	
7/11/2022	15	60	10.1		192		17		40		58		6	5		13	13	309	309	164.6	165.2
7/11/2022	16	60	9.8		181		8		27		70		5			14		310		164.7	
7/11/2022	17	60	9.9		191		18		39		53		5			13		309		163.9	
7/11/2022	18	60	9.7		190		18		46		61		4			14		309		165.8	
7/11/2022	19	60	9.9		191		14		34		60		4	5		14		309	309	164.5	164.7
7/11/2022	20	60	9.8		195		15		36		58		5			13		309		165.1	
7/11/2022	21	60	9.6		192		20		47		57		5			13		309		166.4	
7/11/2022	22	60	9.6		191		20		53		62		5			13		310		165.5	
7/11/2022	23	60	9.6		187		18		41		55		4	4		13	13	309	309	166.3	165.8

Average:  
Geometric Mean Average:

Limit:

189	13
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

70
≥ 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



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Date 7/11/22

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.
7/11/2022	0	60	10.7		189		12		50		76		3			14		311		167.0	
7/11/2022	1	60	10.9		198		10		38		73		2			14		310		165.7	
7/11/2022	2	60	11.0		195		8		34		76		1			14		311		163.4	
7/11/2022	3	60	10.8		197		5		34		86		2	2		14		315	312	165.7	165.5
7/11/2022	4	60	10.8		195		19		60		69		4			14		313		164.3	
7/11/2022	5	60	10.7		196		12		45		74		3			14		310		164.2	
7/11/2022	6	60	11.1		182		11		35		69		5			14		313		163.8	
7/11/2022	7	60	11.3		191		1		16		91		6	5		14	14	316	313	158.9	162.8
7/11/2022	8	60	11.5		194		1		19		94		6			14		314		155.5	
7/11/2022	9	60	11.4		198		14		51		73		6			14		315		157.0	
7/11/2022	10	60	11.1		193		2		16		87		5			14		318		162.5	
7/11/2022	11	60	10.9		198		2		18		89		5	6		14		318	316	164.9	160.0
7/11/2022	12	60	10.7		194		1		18		96		4			14		308		167.5	
7/11/2022	13	60	10.8		197		6		22		71		4			14		303		166.9	
7/11/2022	14	60	10.8		197		2		14		87		4			14		312		165.7	
7/11/2022	15	60	10.9		196		9		33		73		4	4		13	14	309	308	163.9	166.0
7/11/2022	16	60	10.8		197		3		16		84		4			13		312		162.8	
7/11/2022	17	60	10.6		197		14		28		50		3			13		315		166.3	
7/11/2022	18	60	10.7		195		11		28		59		3			13		317		165.9	
7/11/2022	19	60	10.8		199		13		35		62		4	4		13		317	315	165.3	165.1
7/11/2022	20	60	10.7		196		12		35		65		3			13		312		166.6	
7/11/2022	21	60	10.7		197		15		30		51		3			13		314		167.0	
7/11/2022	22	60	10.8		195		16		29		43		3			13		314		166.0	
7/11/2022	23	60	10.9		196		19		26		27		3	3		13	13	313	313	165.7	166.4

Average:  
Geometric Mean Average:

Limit:

195	6
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

77
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≤ 12 8-HR. Block Average

lb/hr

see above
≤ 345 4-HR Block Average

°F

see above
≤ 173 4-HR Block Average

klb/hr

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



Date 11-Jul-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	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1
3	1	1	1	1	1	1	1	1	1	1	1
4	1	1	1	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	1	1	1	1
6	2	IC	5	IC	1	1	1	1	1	1	2
7	1	1	1	1	1	1	1	1	1	1	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	1	1	1	1	1	1
18	1	1	1	1	1	1	1	1	1	1	1
19	1	1	1	1	1	1	1	1	1	1	1
20	1	1	1	1	1	1	1	1	1	1	1
21	1	1	1	1	1	1	1	1	1	1	1
22	1	1	1	1	1	1	1	1	1	1	1
23	1	1	1	1	1	1	1	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



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



Date 11-Jul-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	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1
3	1	1	1	1	1	1	1	1	1	1	1
4	1	1	1	1	1	2	1	1	1	2	1
5	1	1	1	1	1	1	1	1	1	1	1
6	1	IBC	6	IBC	1	1	1	1	1	1	2
7	1	1	1	1	1	1	1	1	1	1	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	2	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	2	2	1	1	1	2	1
16	1	1	1	1	1	1	1	1	1	1	1
17	1	1	1	1	1	1	1	1	1	1	1
18	1	1	1	1	1	1	1	1	1	1	1
19	1	1	1	1	1	1	1	1	1	1	1
20	1	1	1	1	1	1	1	1	1	1	1
21	1	1	1	1	1	1	1	1	1	1	1
22	1	1	1	1	1	1	1	1	1	1	1
23	1	1	1	1	1	1	1	1	1	1	1

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