



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



Date 7/18/22

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.
7/18/2022	0	60	10.2		187		29		96		69		4			13		307		166.7	
7/18/2022	1	60	9.9		181		24		81		70		4			13		306		168.5	
7/18/2022	2	60	10.1		189		16		49		68		4			13		306		163.1	
7/18/2022	3	60	9.9		185		22		57		61		3	4		13		311	307	166.0	166.1
7/18/2022	4	60	10.1		162		7		49		85		6			13		313		164.2	
7/18/2022	5	60	9.9		180		15		31		52		4			14		310		165.1	
7/18/2022	6	60	10.0		176		11		19		43		4			14		308		164.7	
7/18/2022	7	60	10.0		173		14		17		18		3	5		13	13	308	310	165.0	164.7
7/18/2022	8	60	10.0		177		17		15		0		5			13		313		163.9	
7/18/2022	9	60	10.3		185		61		29		0		5			13		312		166.5	
7/18/2022	10	60	10.1		177		38		33		0		6			13		317		163.5	
7/18/2022	11	60	10.3		183		25		37		32		5	6		13		316	314	163.6	164.4
7/18/2022	12	60	10.4		72		15		57		73		1284			13		274		110.3	
7/18/2022	13	60	13.8		175		4		14		72		253			14		267		101.1	
7/18/2022	14	60	11.9		194		7		23		71		17			14		307		125.1	
7/18/2022	15	60	9.6		161		9		36		75		8	390		13	13	311	290	164.2	125.2
7/18/2022	16	60	9.7		172		4		23		81		8			13		307		165.3	
7/18/2022	17	60	9.8		166		11		38		70		8			13		303		166.6	
7/18/2022	18	60	9.6		177		5		24		79		6			13		303		163.8	
7/18/2022	19	60	9.4		182		12		29		60		6	7		13		308	305	165.6	165.3
7/18/2022	20	60	9.4		178		7		26		72		6			13		306		165.2	
7/18/2022	21	60	9.4		179		8		26		67		6			13		306		164.9	
7/18/2022	22	60	9.4		164		13		28		53		6			14		308		165.9	
7/18/2022	23	60	9.5		172		10		18		44		7	6		13	13	308	307	164.6	165.2

Average:  
Geometric Mean Average:

Limit:

173	13
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

59
≥ 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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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.
7/18/2022	0	60	10.9		161		26		73		64		3			14		315		162.5	
7/18/2022	1	60	11.2		175		21		54		61		3			13		316		157.1	
7/18/2022	2	60	10.8		171		20		51		61		2			13		322		160.0	
7/18/2022	3	60	10.8		172		15		46		68		2	2		14		313	316	164.9	161.1
7/18/2022	4	60	10.6		173		20		50		60		3			14		311		163.3	
7/18/2022	5	60	10.6		167		23		31		28		2			14		316		166.4	
7/18/2022	6	60	10.5		166		24		16		0		2			14		316		165.6	
7/18/2022	7	60	10.6		178		17		21		20		2	2		14	14	316	315	165.0	165.1
7/18/2022	8	60	10.6		176		19		31		37		3			14		302		167.0	
7/18/2022	9	60	11.0		178		8		15		47		4			13		307		161.2	
7/18/2022	10	60	10.9		173		14		26		47		4			14		306		158.2	
7/18/2022	11	60	10.8		164		20		28		31		3	3		15		309	306	162.7	162.3
7/18/2022	12	56	13.8		145		8		25		67		229			14		272		78.5	
7/18/2022	13	60	10.8		173		4		27		86		6			14		277		146.2	
7/18/2022	14	60	10.9		164		9		21		56		3			14		314		151.4	
7/18/2022	15	60	10.8		165		7		27		75		4	61		14	14	313	294	157.5	133.4
7/18/2022	16	60	10.5		173		8		22		65		3			14		312		159.0	
7/18/2022	17	60	10.5		173		14		27		49		3			14		320		161.4	
7/18/2022	18	60	10.5		177		11		24		53		2			14		321		161.0	
7/18/2022	19	60	10.6		177		12		22		47		2	2		13		318	318	159.5	160.2
7/18/2022	20	60	10.6		174		7		21		65		2			14		318		160.5	
7/18/2022	21	60	10.5		171		13		30		57		2			13		314		163.7	
7/18/2022	22	60	10.7		180		7		25		72		2			14		312		160.1	
7/18/2022	23	60	10.8		167		3		17		80		3	2		14	14	310	313	158.6	160.7

Average:  
Geometric Mean Average:

Limit:

171	12
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

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57
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# WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 18-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	1
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	2	1	1	2	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 18-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	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	1	1	2	2	2	1	2	2	2	2
3	2	2	1	1	1	1	1	1	2	1	1
4	2	1	2	1	1	1	1	1	1	1	1
5	2	1	2	2	2	2	2	2	1	2	2
6	1	IBC	6	IBC	2	2	2	2	2	2	2
7	2	1	1	2	2	1	2	2	1	2	1
8	2	2	2	2	2	1	1	1	1	1	1
9	2	1	1	1	2	1	2	2	2	1	1
10	1	2	2	2	2	1	1	1	2	1	1
11	1	1	1	2	2	2	1	1	1	2	1
12	1	1	1	2	1	1	2	IF	1	IF	1
13	1	1	1	2	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	2	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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