



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



Date 8/9/22

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.
8/9/2022	0	60	9.6		179		6		44		86		4			13		305		165.8	
8/9/2022	1	60	9.7		169		17		72		77		4			13		311		165.4	
8/9/2022	2	60	9.8		167		13		77		83		4			13		299		163.5	
8/9/2022	3	60	9.6		177		22		82		73		4	4		13		306	305	165.4	165.0
8/9/2022	4	60	9.6		179		23		78		71		4			13		310		166.0	
8/9/2022	5	60	9.5		181		15		37		59		4			13		315		164.9	
8/9/2022	6	60	9.8		177		19		53		63		6			13		312		164.1	
8/9/2022	7	60	10.0		162		3		54		95		6	5		13	13	298	309	157.6	163.1
8/9/2022	8	60	9.9		162		8		44		82		4			13		306		167.2	
8/9/2022	9	60	10.4		179		17		53		68		5			13		316		165.9	
8/9/2022	10	60	10.3		171		9		39		78		6			13		308		161.6	
8/9/2022	11	60	10.2		170		9		52		82		4	5		13		311	310	164.9	164.9
8/9/2022	12	60	10.0		180		21		86		75		6			13		316		165.7	
8/9/2022	13	60	10.1		188		16		54		71		7			14		316		164.2	
8/9/2022	14	60	9.9		178		18		61		71		6			13		312		166.1	
8/9/2022	15	60	9.8		180		15		56		73		8	7		13	13	315	315	163.9	165.0
8/9/2022	16	60	9.4		153		6		82		93		7			13		305		161.2	
8/9/2022	17	60	9.8		162		15		92		84		4			14		299		162.8	
8/9/2022	18	60	9.5		151		18		109		84		5			13		302		165.8	
8/9/2022	19	60	9.6		148		4		105		96		4	5		13		293	300	166.1	164.0
8/9/2022	20	60	9.4		153		15		75		80		4			13		305		165.7	
8/9/2022	21	60	9.5		157		21		91		77		4			13		312		164.3	
8/9/2022	22	60	9.3		152		17		66		75		4			13		312		167.2	
8/9/2022	23	60	9.5		158		14		60		77		3	4		12	13	311	310	164.9	165.5

Average:  
Geometric Mean Average:

Limit:

168	13
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

81
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≥ 12 8-HR. Block Average

lb/hr

see above
≤ 345 °F 4-HR Block Average

°F

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



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Date 8/9/22

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.
8/9/2022	0	60	10.2		186		8		30		74		2			14		306		164.9	
8/9/2022	1	60	10.4		179		10		40		74		2			14		305		162.8	
8/9/2022	2	60	10.2		178		19		40		53		2			14		307		166.1	
8/9/2022	3	60	10.2		176		14		38		64		2	2		14		303	305	166.8	165.2
8/9/2022	4	60	10.2		177		16		49		68		5			14		302		165.0	
8/9/2022	5	60	9.9		189		5		12		59		4			14		305		163.6	
8/9/2022	6	60	9.8		185		4		4		0		3			14		307		165.4	
8/9/2022	7	60	10.7		135		6		19		67		3	4		14	14	305	305	166.8	165.2
8/9/2022	8	60	10.5		152		4		19		79		6			14		303		168.5	
8/9/2022	9	60	9.9		160		9		32		71		146			14		302		177.3	
8/9/2022	10	60	11.0		166		4		18		78		5			14		302		162.3	
8/9/2022	11	60	10.7		161		5		21		77		4	40		14		309	304	161.5	167.4
8/9/2022	12	60	10.1		171		12		36		67		5			14		314		164.6	
8/9/2022	13	60	10.4		168		5		16		66		7			14		316		163.6	
8/9/2022	14	60	10.0		173		8		24		67		5			14		316		164.6	
8/9/2022	15	60	9.8		176		8		24		66		5	6		14	14	316	315	164.0	164.2
8/9/2022	16	60	9.8		176		9		35		74		4			14		315		165.1	
8/9/2022	17	60	10.1		172		16		49		68		4			14		315		164.1	
8/9/2022	18	60	10.2		182		22		62		65		4			14		320		165.5	
8/9/2022	19	60	10.4		170		21		80		74		5	5		13		316	316	165.1	165.0
8/9/2022	20	60	10.6		172		3		27		89		4			14		304		165.2	
8/9/2022	21	60	10.5		175		4		31		87		4			13		304		165.6	
8/9/2022	22	60	10.7		178		7		26		75		3			14		312		165.3	
8/9/2022	23	60	14.3		207		6		15		59		630	160		14	14	302	306	101.7	149.5

Average:  
Geometric Mean Average:

Limit:

174	8
≤ 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

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



Date 09-Aug-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	3	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	1	1	1	1	1	1	1	1
13	1	1	1	1	1	1	1	1	0	1	1
14	0	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	0	0	0	0	0	0	1	0	0
19	1	1	0	1	0	1	1	1	1	1	0
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 09-Aug-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	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	5	IBC	0	0	0	0	1	0	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	1	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	1	0	0	0	1	0
16	0	0	0	0	0	0	0	0	0	0	0
17	1	3	1	1	1	1	1	1	1	1	1
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	1	1	0	0	1	1	1	0	0

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