



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



Date 8/22/22

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.
8/22/2022	0	60	10.1		153		21		53		60		3			14		316		163.2	
8/22/2022	1	60	10.0		153		22		48		54		3			14		317		164.9	
8/22/2022	2	60	10.1		155		22		43		48		3			14		314		163.5	
8/22/2022	3	60	10.1		155		26		62		58		3	3		14		315	315	167.4	164.8
8/22/2022	4	60	9.5		129		18		71		74		34			13		306		170.2	
8/22/2022	5	60	10.0		147		23		31		28		45			13		312		164.9	
8/22/2022	6	60	10.8		178		19		21		6		6			13		316		164.1	
8/22/2022	7	60	10.9		176		15		28		47		7	23		13	14	311	311	158.5	164.4
8/22/2022	8	60	10.4		153		23		68		66		8			14		304		165.7	
8/22/2022	9	60	10.5		155		8		43		81		8			13		297		167.3	
8/22/2022	10	60	10.8		182		27		75		64		7			14		304		165.5	
8/22/2022	11	60	10.7		180		20		37		46		7	7		14		304	302	164.8	165.8
8/22/2022	12	60	10.9		174		15		32		51		5			14		299		168.8	
8/22/2022	13	60	10.5		189		18		23		20		8			14		313		165.0	
8/22/2022	14	60	10.4		176		17		25		33		7			14		314		166.5	
8/22/2022	15	60	10.4		172		20		23		14		6	6		14	14	318	311	166.6	166.7
8/22/2022	16	60	10.6		178		22		28		22		7			13		320		164.0	
8/22/2022	17	60	10.3		168		17		33		49		6			14		309		166.1	
8/22/2022	18	60	10.1		170		21		30		31		5			14		306		166.9	
8/22/2022	19	60	10.4		173		17		29		42		5	6		14		304	310	164.4	165.4
8/22/2022	20	60	10.0		173		22		29		26		5			14		308		167.5	
8/22/2022	21	60	10.4		194		21		36		43		5			14		310		165.1	
8/22/2022	22	60	10.2		195		20		33		38		5			14		308		165.4	
8/22/2022	23	60	10.2		194		23		40		42		5	5		14	14	314	310	165.5	165.9

Average: Geometric Mean Average:	170	19	47	OR	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 COMPLIANCE SUMMARY REPORT



Date 8/22/22

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.
8/22/2022	0	60	10.7		180		27		63		58		3			14		313		168.2	
8/22/2022	1	60	10.3		176		23		47		51		2			14		316		171.1	
8/22/2022	2	60	10.6		177		20		42		53		3			14		312		167.8	
8/22/2022	3	60	10.3		171		24		65		63		3	3		14		309	312	169.4	169.1
8/22/2022	4	60	10.5		170		22		46		52		4			14		301		166.2	
8/22/2022	5	60	10.5		169		18		26		29		4			14		314		166.8	
8/22/2022	6	60	10.5		172		11		11		0		5			14		317		165.5	
8/22/2022	7	60	10.7		179		9		16		46		4	4		14	14	318	312	165.9	166.1
8/22/2022	8	60	10.3		172		7		20		66		3			14		302		167.4	
8/22/2022	9	60	10.5		169		23		35		33		74			14		314		167.6	
8/22/2022	10	60	10.6		168		24		63		62		4			14		310		166.3	
8/22/2022	11	60	10.5		170		10		31		67		5	22		14		305	308	167.0	167.1
8/22/2022	12	60	10.6		182		11		22		52		5			14		302		166.0	
8/22/2022	13	60	10.5		178		28		35		22		5			14		306		166.9	
8/22/2022	14	60	10.7		187		13		24		47		4			14		306		166.6	
8/22/2022	15	60	10.5		188		11		17		32		4	4		14	14	306	305	167.1	166.7
8/22/2022	16	60	10.5		175		19		19		5		4			14		314		166.9	
8/22/2022	17	60	10.5		183		18		17		0		4			14		314		166.2	
8/22/2022	18	60	10.5		182		19		19		0		3			14		316		167.2	
8/22/2022	19	60	10.4		172		13		18		29		3	4		14		311	314	167.0	166.8
8/22/2022	20	60	10.5		186		16		23		31		3			14		306		166.9	
8/22/2022	21	60	10.7		182		10		17		43		3			14		303		165.5	
8/22/2022	22	60	10.8		187		19		32		40		4			14		308		166.8	
8/22/2022	23	60	10.6		145		17		29		40		4	3		14	14	307	306	165.7	166.2

Average:  
Geometric Mean Average:

Limit:

176	16
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

41
≥ 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 22-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	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	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 22-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	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	IBC	5	IBC	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	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

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