



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



Date 8/20/22

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.
8/20/2022	0	60	9.8		194		32		96		67		3			14		316		166.0	
8/20/2022	1	60	9.9		191		25		72		65		4			14		318		164.6	
8/20/2022	2	60	9.8		191		22		52		57		4			14		315		167.0	
8/20/2022	3	60	9.8		194		40		77		48		4	4		13		312	315	167.1	166.2
8/20/2022	4	60	9.8		185		22		69		68		4			14		312		168.5	
8/20/2022	5	60	10.0		179		23		60		61		3			13		304		165.9	
8/20/2022	6	60	9.6		187		21		64		67		5			14		304		165.0	
8/20/2022	7	60	9.7		175		42		171		76		5	4		13	14	305	306	164.0	165.8
8/20/2022	8	60	9.8		175		5		83		93		4			14		292		166.8	
8/20/2022	9	60	9.8		193		27		130		79		4			14		292		165.2	
8/20/2022	10	60	9.7		189		38		149		75		4			13		306		166.9	
8/20/2022	11	60	9.8		193		28		125		78		4	4		14		305	299	167.0	166.5
8/20/2022	12	60	9.9		191		21		101		80		4			14		306		164.7	
8/20/2022	13	60	9.8		187		26		105		75		4			14		314		167.9	
8/20/2022	14	60	9.8		180		16		81		80		4			14		308		167.2	
8/20/2022	15	60	10.1		174		21		110		81		3	4		14	14	301	307	165.7	166.4
8/20/2022	16	60	10.0		172		20		90		78		3			14		304		168.8	
8/20/2022	17	60	10.1		170		12		74		83		3			14		300		166.4	
8/20/2022	18	60	10.5		177		22		91		76		4			14		304		162.9	
8/20/2022	19	60	10.4		168		20		98		79		4	4		14		304	303	164.7	165.7
8/20/2022	20	60	10.6		179		17		97		83		4			14		293		162.5	
8/20/2022	21	60	10.6		187		26		92		71		3			14		311		163.0	
8/20/2022	22	60	10.4		183		33		114		71		4			14		320		164.1	
8/20/2022	23	60	10.4		168		29		105		73		4	4		14	14	315	310	163.2	163.2

Average:  
Geometric Mean Average:

Limit:

183	23
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

75
≥ 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



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



Date 8/20/22

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.
8/20/2022	0	60	10.4		174		37		125		71		3			14		310		167.4	
8/20/2022	1	60	10.6		176		23		68		66		3			14		310		163.9	
8/20/2022	2	60	10.5		183		22		49		56		4			14		310		168.3	
8/20/2022	3	60	10.6		175		19		49		60		3	3		14		310	310	166.5	166.5
8/20/2022	4	60	10.6		180		17		50		66		4			14		310		167.1	
8/20/2022	5	60	10.6		186		29		67		56		3			14		310		167.2	
8/20/2022	6	60	10.4		194		18		48		62		3			14		310		165.4	
8/20/2022	7	60	10.4		195		38		132		71		3	3		14	14	310	310	165.8	166.4
8/20/2022	8	60	10.4		193		23		72		68		2			14		310		166.0	
8/20/2022	9	60	10.3		195		26		93		73		3			14		310		167.2	
8/20/2022	10	60	10.2		194		18		64		71		3			14		310		167.1	
8/20/2022	11	60	10.2		185		23		99		77		2	3		14		310	310	167.1	166.9
8/20/2022	12	60	10.4		188		20		82		76		3			14		311		164.8	
8/20/2022	13	60	10.3		191		18		91		81		3			14		310		167.9	
8/20/2022	14	60	10.0		185		33		141		77		2			14		310		169.4	
8/20/2022	15	60	10.2		178		26		120		79		2	3		14	14	310	310	168.4	167.6
8/20/2022	16	60	9.9		175		14		71		80		2			14		310		173.0	
8/20/2022	17	60	10.3		168		14		66		78		2			14		309		162.6	
8/20/2022	18	60	10.4		172		20		88		77		2			14		311		160.9	
8/20/2022	19	60	10.2		172		19		83		77		2	2		14		311	310	166.8	165.8
8/20/2022	20	60	10.5		183		13		63		80		2			14		310		163.8	
8/20/2022	21	60	10.4		175		25		98		74		3			14		310		164.7	
8/20/2022	22	60	10.6		187		25		102		75		2			14		310		165.4	
8/20/2022	23	60	10.6		181		20		74		73		3	2		14	14	310	310	164.3	164.6

<b>Average:</b> <b>Geometric Mean Average:</b>	<b>183</b>	<b>22</b>	<b>OR</b>	<b>73</b>	see above	see above	see above	
<b>Limit:</b>	$\leq 205$ 24-HR Block Avg.	$\leq 29$ 24-HR Geometric Mean		$\geq 75\%$ Removal Efficiency	$\leq 69$ ppmc 4-HR Block Average	$\geq 12$ lb/hr 8-HR. Block Average	$\leq 345$ °F 4-HR Block Average	$\leq 173$ klb/hr 4-HR Block Average

**Status Flags**

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



Date 20-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 20-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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