



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



Date 8/23/22

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.
8/23/2022	0	60	10.1		184		22		35		38		5			14		316		167.2	
8/23/2022	1	60	10.2		182		23		40		43		5			14		315		166.7	
8/23/2022	2	60	10.2		172		19		29		34		5			14		312		166.8	
8/23/2022	3	60	10.2		175		21		29		27		5	5		14		315	315	166.3	166.7
8/23/2022	4	60	10.3		176		20		34		41		5			14		313		166.0	
8/23/2022	5	60	10.3		174		21		28		24		6			14		311		166.4	
8/23/2022	6	60	10.0		178		19		22		14		6			13		313		165.6	
8/23/2022	7	60	10.9		177		16		34		52		7	6		13	14	309	312	165.9	166.0
8/23/2022	8	60	11.0		187		30		42		30		6			15		307		167.1	
8/23/2022	9	60	10.5		182		17		53		68		7			14		301		166.5	
8/23/2022	10	60	10.4		138		22		76		71		6			15		302		166.2	
8/23/2022	11	60	10.1		145		14		46		71		6	6		9		307	304	164.1	166.0
8/23/2022	12	60	10.2		145		9		37		76		7			17		312		165.3	
8/23/2022	13	60	10.4		138		7		41		83		7			15		306		164.1	
8/23/2022	14	60	10.3		139		3		47		93		7			14		300		166.9	
8/23/2022	15	60	10.3		157		44		137		68		6	7		15	14	321	310	165.9	165.6
8/23/2022	16	60	10.2		153		26		80		68		6			15		318		166.2	
8/23/2022	17	60	10.3		154		23		80		72		6			15		316		164.5	
8/23/2022	18	60	10.4		144		18		78		77		6			15		309		164.1	
8/23/2022	19	60	10.4		151		20		82		76		5	6		15		303	312	165.4	165.1
8/23/2022	20	60	10.4		152		18		70		75		5			15		302		163.8	
8/23/2022	21	60	10.3		155		21		75		72		5			14		307		167.6	
8/23/2022	22	60	10.3		146		19		66		71		6			15		309		165.5	
8/23/2022	23	60	10.2		147		24		74		67		5	5		15	15	311	307	167.3	166.0

Average:  
Geometric Mean Average:

Limit:

161	18
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

64
≥ 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



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



Date 8/23/22

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.
8/23/2022	0	60	10.7		138		23		43		47		4			14		309		166.8	
8/23/2022	1	60	10.8		138		22		38		43		4			14		311		165.8	
8/23/2022	2	60	10.7		141		21		30		30		3			14		306		167.1	
8/23/2022	3	60	10.6		139		23		26		13		4	3		14		312	309	167.0	166.7
8/23/2022	4	60	10.5		144		18		26		31		5			14		310		166.5	
8/23/2022	5	60	10.4		139		25		26		6		4			14		312		165.7	
8/23/2022	6	60	10.3		140		17		11		0		4			14		315		165.4	
8/23/2022	7	60	10.5		136		7		10		26		15	7		14	14	305	311	165.6	165.8
8/23/2022	8	60	10.2		141		11		15		25		7			13		311		167.9	
8/23/2022	9	60	10.6		139		30		80		63		5			13		313		163.0	
8/23/2022	10	60	10.3		140		15		36		57		6			13		313		166.2	
8/23/2022	11	60	10.4		139		8		24		68		4	5		8		309	311	164.5	165.4
8/23/2022	12	60	10.4		140		7		34		79		3			16		307		165.7	
8/23/2022	13	60	10.4		138		13		42		68		4			15		310		167.9	
8/23/2022	14	60	10.2		141		8		35		76		4			14		314		165.8	
8/23/2022	15	60	10.3		139		32		116		72		5	4		14	13	315	311	167.1	166.6
8/23/2022	16	60	10.1		141		21		66		68		5			14		317		166.8	
8/23/2022	17	60	10.3		140		21		67		69		4			14		316		165.4	
8/23/2022	18	60	10.2		139		21		63		67		4			14		315		165.3	
8/23/2022	19	60	10.4		139		20		55		64		3	4		14		319	317	166.7	166.1
8/23/2022	20	60	10.4		140		22		57		63		2			14		318		167.1	
8/23/2022	21	60	10.4		140		23		71		67		3			14		316		165.9	
8/23/2022	22	60	10.6		140		9		41		79		3			14		307		165.6	
8/23/2022	23	60	10.5		140		11		46		77		3	3		14	14	308	312	167.4	166.5

<b>Average:</b>	<b>140</b>	<b>16</b>	<b>57</b>	<b>OR</b>	<b>see above</b>	<b>see above</b>	<b>see above</b>
<b>Geometric Mean Average:</b>					<b>≤ 69 ppmc</b>	<b>≥ 12 lb/hr</b>	<b>≤ 345 °F</b>
<b>Limit:</b>	<b>≤ 205</b>	<b>≤ 29</b>	<b>≥ 75%</b>		<b>4-HR Block Average</b>	<b>8-HR. Block Average</b>	<b>4-HR Block Average</b>
	<b>24-HR Block Avg.</b>	<b>24-HR Geometric Mean</b>	<b>Removal Efficiency</b>				<b>≤ 173 klb/hr</b>
							<b>4-HR Block Average</b>

**Status Flags**

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



Date 23-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 23-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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