



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



Date 8/13/22

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.
8/13/2022	0	60	9.7		191		9		62		85		4			14		308		166.5	
8/13/2022	1	60	9.7		188		10		60		84		3			15		306		163.9	
8/13/2022	2	60	9.5		195		9		64		86		4			16		310		164.4	
8/13/2022	3	60	9.5		186		14		64		78		4	4		15		312	309	165.4	165.0
8/13/2022	4	60	9.5		190		17		68		75		3			14		314		166.4	
8/13/2022	5	60	9.7		188		11		60		82		3			13		307		165.2	
8/13/2022	6	60	9.6		185		12		57		79		3			14		303		164.1	
8/13/2022	7	60	9.7		172		3		49		94		3	3		14	14	299	306	165.5	165.3
8/13/2022	8	60	9.7		194		6		45		87		3			22		307		164.6	
8/13/2022	9	60	9.8		195		10		55		82		3			2		315		165.7	
8/13/2022	10	60	9.8		188		21		111		81		3			16		307		165.1	
8/13/2022	11	60	9.6		192		22		103		78		5	4		21		311	310	165.3	165.2
8/13/2022	12	60	9.8		192		19		81		77		3			2		312		164.9	
8/13/2022	13	60	9.7		190		42		175		76		3			11		316		166.4	
8/13/2022	14	60	9.6		185		22		109		79		3			27		309		165.6	
8/13/2022	15	60	9.7		181		13		71		82		3	3		21	15	305	311	164.8	165.4
8/13/2022	16	60	9.9		181		18		86		79		3			23		306		164.3	
8/13/2022	17	60	9.7		180		20		81		75		2			19		308		167.1	
8/13/2022	18	60	9.8		177		16		80		80		2			21		309		168.1	
8/13/2022	19	60	10.2		173		7		126		94		2	2		16		292	304	163.4	165.7
8/13/2022	20	60	10.0		187		20		120		83		2			11		289		166.5	
8/13/2022	21	60	9.9		183		22		129		83		2			14		293		166.6	
8/13/2022	22	60	9.9		174		7		91		92		2			14		291		164.0	
8/13/2022	23	60	10.0		169		3		71		95		3	2		15	17	292	291	161.9	164.8

Average: Geometric Mean Average:	<b>185</b>	<b>13</b>	<b>OR</b>	<b>84</b>	see above	see above	see above	
Limit:	<b>≤ 205</b> 24-HR Block Avg.	<b>≤ 29</b> 24-HR Geometric Mean		<b>≥ 75%</b> Removal Efficiency	<b>≤ 69</b> ppmc 4-HR Block Average	<b>≥ 12</b> lb/hr 8-HR. Block Average	<b>≤ 345</b> °F 4-HR Block Average	<b>≤ 173</b> 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 8/13/22

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.
8/13/2022	0	60	10.2		193		6		36		82		3			13		316		165.5	
8/13/2022	1	60	10.2		187		5		36		86		4			9		314		165.3	
8/13/2022	2	60	10.2		192		8		37		79		3			18		317		165.9	
8/13/2022	3	60	10.3		182		2		27		91		2	3		18		307	314	166.0	165.7
8/13/2022	4	60	10.5		183		2		24		90		4			16		301		164.8	
8/13/2022	5	60	10.4		177		4		15		74		2			17		307		166.0	
8/13/2022	6	60	10.5		173		5		12		60		4			16		306		165.1	
8/13/2022	7	60	10.5		168		5		12		59		5	4		16	15	305	305	165.0	165.2
8/13/2022	8	60	10.2		174		3		8		66		3			16		310		166.1	
8/13/2022	9	60	10.4		182		4		15		77		3			15		313		164.5	
8/13/2022	10	60	10.3		173		8		34		76		5			16		312		166.0	
8/13/2022	11	60	10.3		172		13		51		74		4	4		15		311	312	166.2	165.7
8/13/2022	12	60	10.4		172		3		52		94		3			13		298		165.9	
8/13/2022	13	60	10.4		172		5		63		91		2			14		297		166.0	
8/13/2022	14	60	10.3		167		5		47		90		2			15		301		165.9	
8/13/2022	15	60	10.4		166		7		54		87		2	2		14	15	304	300	166.1	166.0
8/13/2022	16	60	10.7		172		20		110		82		2			14		297		164.2	
8/13/2022	17	60	10.4		177		18		99		82		2			12		301		165.8	
8/13/2022	18	60	10.4		177		19		92		79		2			16		306		164.4	
8/13/2022	19	60	10.4		176		24		111		78		2	2		20		312	304	165.8	165.0
8/13/2022	20	60	10.6		180		29		134		78		2			19		313		164.7	
8/13/2022	21	60	10.4		180		22		98		78		2			18		315		166.7	
8/13/2022	22	60	10.5		180		18		87		80		2			17		315		166.1	
8/13/2022	23	60	10.4		183		10		64		85		2	2		14	16	310	313	168.3	166.5

Average:  
Geometric Mean Average:

Limit:

177	8
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

82
≥ 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 13-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 13-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	0	0	1	0	1	1	1	1	1	1	0
1	1	1	0	1	1	1	1	1	1	1	0
2	1	1	1	1	1	1	0	1	1	1	0
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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