



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



Date 8/26/22

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.
8/26/2022	0	60	10.7		141		11		40		72		6			14		321		164.7	
8/26/2022	1	60	10.8		142		11		40		73		6			14		320		168.7	
8/26/2022	2	60	11.1		140		6		38		83		6			14		318		166.1	
8/26/2022	3	60	10.5		159		2		63		98		5	6		14		289	312	165.2	166.2
8/26/2022	4	60	10.5		175		6		59		90		5			14		307		162.7	
8/26/2022	5	60	10.2		169		1		8		88		6			14		299		165.5	
8/26/2022	6	60	10.2		182		1		11		87		6			14		308		165.0	
8/26/2022	7	60	10.7		181		1		13		91		5	5		14	14	301	304	164.2	164.4
8/26/2022	8	60	10.6		184		11		54		80		5			14		302		166.2	
8/26/2022	9	60	10.5		179		9		50		82		7			14		307		165.7	
8/26/2022	10	60	10.6		179		13		64		80		7			14		309		166.0	
8/26/2022	11	60	10.4		178		6		50		88		5	6		14		303	305	166.4	166.1
8/26/2022	12	60	10.5		181		4		45		90		7			14		308		166.8	
8/26/2022	13	60	10.5		178		7		47		86		6			14		311		167.6	
8/26/2022	14	60	10.3		181		1		25		95		7			14		314		163.4	
8/26/2022	15	60	10.7		178		9		78		89		6	6		14	14	309	311	162.8	165.2
8/26/2022	16	60	10.4		172		2		38		95		5			14		306		166.0	
8/26/2022	17	60	10.7		171		2		49		97		5			14		301		162.2	
8/26/2022	18	60	10.8		174		1		51		99		5			14		298		161.3	
8/26/2022	19	60	10.8		181		3		67		95		4	5		14		289	298	163.7	163.3
8/26/2022	20	60	10.6		183		9		69		87		4			14		296		164.6	
8/26/2022	21	60	10.7		185		17		69		76		4			14		310		164.0	
8/26/2022	22	60	10.4		187		12		60		81		5			14		312		164.8	
8/26/2022	23	60	10.4		175		17		64		74		5	4		14	14	312	307	165.5	164.7

Average: Geometric Mean Average:	173	4	<b>OR</b>	89	see above	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 8/26/22

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.
8/26/2022	0	60	11.1		140		22		74		70		5			15		327		165.1	
8/26/2022	1	60	10.8		139		20		60		68		4			15		329		166.6	
8/26/2022	2	60	11.1		141		8		56		86		4			14		315		166.7	
8/26/2022	3	60	11.0		151		10		73		86		4	4		14		304	319	166.1	166.1
8/26/2022	4	60	10.7		159		9		52		82		3			15		307		168.0	
8/26/2022	5	60	10.8		165		5		29		84		3			15		313		165.0	
8/26/2022	6	60	10.7		186		4		25		83		4			15		315		159.1	
8/26/2022	7	60	10.8		154		3		27		88		5	4		13	14	305	310	166.4	164.6
8/26/2022	8	60	10.6		157		3		47		93		7			14		294		166.8	
8/26/2022	9	60	10.6		162		5		47		90		7			13		311		166.4	
8/26/2022	10	60	10.7		158		8		77		90		7			14		303		167.2	
8/26/2022	11	60	10.5		155		13		73		82		8	7		15		310	304	166.7	166.8
8/26/2022	12	60	10.6		146		6		61		90		8			14		308		166.8	
8/26/2022	13	60	10.4		151		6		50		89		8			15		311		168.2	
8/26/2022	14	60	10.4		158		3		36		91		6			14		315		165.1	
8/26/2022	15	60	10.7		164		6		66		91		5	7		15	14	310	311	166.8	166.7
8/26/2022	16	60	10.6		159		4		56		93		6			14		309		168.5	
8/26/2022	17	60	10.7		160		7		53		87		6			15		319		168.2	
8/26/2022	18	60	10.8		160		6		48		88		3			15		321		167.3	
8/26/2022	19	60	10.9		161		10		59		83		3	5		14		314	316	166.9	167.7
8/26/2022	20	60	10.9		162		11		53		79		4			14		307		165.7	
8/26/2022	21	60	10.9		168		15		50		71		4			14		314		165.6	
8/26/2022	22	60	10.9		169		18		48		63		5			14		323		166.3	
8/26/2022	23	60	10.9		164		20		49		59		5	4		14	14	323	316	166.8	166.1

Average: Geometric Mean Average:	<b>158</b>	<b>8</b>	<b>OR</b>	<b>85</b>	see above	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

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



Date 26-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	3	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

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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 26-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	2
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	2	2	2	2	2	2	2
20	2	2	2	2	2	2	2	2	2	2	2
21	2	2	2	2	2	2	2	2	2	2	2
22	2	2	2	2	2	2	2	2	2	2	2
23	2	2	2	2	2	2	2	2	2	2	2

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