



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



Date 8/24/22

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.
8/24/2022	0	60	10.4		149		23		69		67		5			14		314		165.2	
8/24/2022	1	60	10.4		150		19		48		60		5			15		315		166.4	
8/24/2022	2	60	10.3		147		21		68		69		5			14		316		165.8	
8/24/2022	3	60	10.3		149		19		56		66		5	5		15		317	316	166.0	165.8
8/24/2022	4	60	10.1		134		21		87		75		5			15		311		168.3	
8/24/2022	5	60	10.5		174		47		51		8		5			15		304		169.8	
8/24/2022	6	60	10.6		186		40		43		6		6			15		308		164.6	
8/24/2022	7	60	10.2		140		1		24		95		5	5		15	15	309	308	166.8	167.4
8/24/2022	8	60	10.4		138		5		51		90		6			15		309		167.2	
8/24/2022	9	60	10.8		169		14		68		80		7			15		310		162.0	
8/24/2022	10	60	10.5		187		16		68		77		6			14		309		167.3	
8/24/2022	11	60	10.7		175		20		69		71		9	7		14		309	309	168.1	166.2
8/24/2022	12	60	10.7		192		16		68		77		7			15		310		165.5	
8/24/2022	13	60	10.4		187		9		49		81		7			15		309		166.2	
8/24/2022	14	60	10.5		191		29		101		71		9			15		310		167.0	
8/24/2022	15	60	10.2		181		19		73		73		9	8		15	14	310	310	168.0	166.7
8/24/2022	16	60	10.4		182		18		56		68		9			15		309		166.1	
8/24/2022	17	60	10.5		191		30		135		78		7			15		309		166.8	
8/24/2022	18	60	10.6		182		22		122		82		7			15		309		166.7	
8/24/2022	19	60	10.5		189		22		113		81		6	7		15		309	309	168.9	167.1
8/24/2022	20	60	10.7		188		22		133		83		8			15		310		165.2	
8/24/2022	21	60	10.6		190		21		107		81		8			14		310		165.4	
8/24/2022	22	60	10.6		184		20		101		81		7			15		308		166.5	
8/24/2022	23	60	10.7		141		17		89		81		7	7		14	14	309	309	165.9	165.8

Average: Geometric Mean Average:	171	17	<b>OR</b>	76	see above	see above	see above	see above			
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 4-HR Block Average	ppmc	≥ 12 8-HR. Block Average	lb/hr	≤ 345 °F 4-HR Block Average	≤ 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 8/24/22

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.
8/24/2022	0	60	10.6		140		13		43		70		3			14		310		166.3	
8/24/2022	1	60	10.7		139		21		43		51		3			14		318		166.5	
8/24/2022	2	60	10.6		141		18		47		62		3			14		323		166.8	
8/24/2022	3	60	10.5		141		10		31		67		3	3		14		322	318	167.3	166.7
8/24/2022	4	60	10.4		142		10		42		77		4			13		313		167.0	
8/24/2022	5	60	10.4		140		15		61		76		3			14		306		166.6	
8/24/2022	6	60	10.4		139		9		31		72		4			13		307		164.7	
8/24/2022	7	60	10.4		142		5		21		77		3	3		13	13	306	308	165.9	166.0
8/24/2022	8	60	10.3		176		5		28		81		4			14		310		166.8	
8/24/2022	9	60	10.6		172		9		44		79		6			13		310		165.9	
8/24/2022	10	60	10.8		174		7		32		78		2			13		310		167.5	
8/24/2022	11	60	10.9		164		3		23		88		3	4		14		310	310	164.7	166.2
8/24/2022	12	60	10.5		175		4		28		86		5			14		311		165.7	
8/24/2022	13	60	10.4		177		4		25		85		4			14		310		166.5	
8/24/2022	14	60	10.6		182		22		84		74		4			14		310		167.5	
8/24/2022	15	60	10.3		176		7		33		80		4	4		14	14	310	310	165.3	166.3
8/24/2022	16	60	10.3		176		16		47		67		4			14		310		166.8	
8/24/2022	17	60	10.3		176		24		78		70		5			14		310		166.0	
8/24/2022	18	60	10.2		174		17		53		67		4			14		310		166.5	
8/24/2022	19	60	10.3		176		10		44		76		3	4		14		310	310	167.0	166.6
8/24/2022	20	60	10.5		181		16		48		68		3			14		310		166.1	
8/24/2022	21	60	10.4		180		21		61		65		4			14		310		167.1	
8/24/2022	22	60	10.5		176		17		50		66		3			14		310		167.2	
8/24/2022	23	60	10.5		142		20		56		65		4	4		14	14	310	310	167.2	166.9

Average: Geometric Mean Average:	162	11	<b>OR</b>	74	see above	see above	see above	see above			
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 4-HR Block Average	ppmc	≥ 12 8-HR. Block Average	lb/hr	≤ 345 °F 4-HR Block Average	≤ 173 4-HR Block Average	klb/hr

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



Date 24-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	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	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 24-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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