



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



Date 9/4/22

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.
9/4/2022	0	60	10.6		198		23		71		67		4			14		310		166.0	
9/4/2022	1	60	10.5		199		20		67		71		4			13		309		165.6	
9/4/2022	2	60	10.5		197		16		67		76		4			13		309		166.3	
9/4/2022	3	60	10.0		191		21		81		74		24	9		13		309	309	168.5	166.6
9/4/2022	4	60	10.8		199		22		75		71		4			13		309		163.1	
9/4/2022	5	60	11.3		199		18		71		74		4			13		309		159.7	
9/4/2022	6	60	11.0		194		25		90		72		9			14		310		163.7	
9/4/2022	7	60	10.5		188		15		79		81		4	5		13	13	309	309	168.5	163.7
9/4/2022	8	60	10.8		199		17		66		74		4			14		310		165.2	
9/4/2022	9	60	10.5		196		17		75		77		3			14		309		169.1	
9/4/2022	10	60	10.7		194		17		77		78		3			13		310		166.7	
9/4/2022	11	60	10.8		196		25		113		77		4	3		13		309	309	166.2	166.8
9/4/2022	12	60	10.5		191		20		82		75		3			14		309		169.3	
9/4/2022	13	60	10.7		195		25		90		72		4			14		310		166.7	
9/4/2022	14	60	10.6		197		22		65		67		4			14		310		165.8	
9/4/2022	15	60	10.6		186		25		71		65		3	3		14	14	309	309	171.8	168.4
9/4/2022	16	60	10.8		188		26		72		64		3			14		310		168.4	
9/4/2022	17	60	10.6		190		28		73		61		2			14		309		172.5	
9/4/2022	18	60	11.3		195		25		66		61		3			15		301		163.7	
9/4/2022	19	60	10.9		190		26		61		58		3	3		14		308	307	164.7	167.3
9/4/2022	20	60	10.8		193		24		52		53		3			14		303		162.9	
9/4/2022	21	60	10.8		194		25		62		60		4			14		308		163.1	
9/4/2022	22	60	10.5		192		27		70		62		4			14		314		168.1	
9/4/2022	23	60	10.6		188		21		56		62		4	4		14	14	310	309	164.4	164.6

Average: Geometric Mean Average:	194	22	<b>OR</b>	70	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 9/4/22

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.
9/4/2022	0	60	10.8		173		11		22		52		4			14		314		165.2	
9/4/2022	1	60	10.8		173		8		24		67		3			14		314		165.2	
9/4/2022	2	60	10.9		173		10		28		64		3			14		314		164.9	
9/4/2022	3	60	10.7		174		15		31		51		3	4		14		313	314	165.4	165.2
9/4/2022	4	60	10.8		177		8		29		73		5			14		311		164.8	
9/4/2022	5	60	11.0		168		5		29		84		4			14		302		166.7	
9/4/2022	6	60	10.9		171		3		20		84		5			14		306		164.1	
9/4/2022	7	60	10.9		165		4		22		84		6	5		14	14	305	306	165.5	165.3
9/4/2022	8	60	10.9		168		4		23		81		6			14		312		165.8	
9/4/2022	9	60	11.0		157		5		31		84		4			14		306		166.2	
9/4/2022	10	60	11.0		159		5		24		79		4			14		309		164.5	
9/4/2022	11	60	10.9		158		9		53		83		6	5		14		308	309	165.8	165.6
9/4/2022	12	60	10.9		159		5		39		87		4			14		300		164.5	
9/4/2022	13	60	10.7		155		7		36		80		4			14		306		166.3	
9/4/2022	14	60	10.9		155		12		35		65		5			14		311		165.5	
9/4/2022	15	60	10.9		158		13		29		55		4	4		14	14	312	307	166.2	165.7
9/4/2022	16	60	10.9		161		14		23		40		5			13		311		165.4	
9/4/2022	17	60	11.0		160		15		24		36		5			9		311		164.9	
9/4/2022	18	60	11.1		163		14		21		36		5			12		306		164.8	
9/4/2022	19	60	11.1		155		16		22		28		5	5		15		307	309	165.3	165.1
9/4/2022	20	60	11.1		155		24		38		37		4			15		312		166.8	
9/4/2022	21	60	11.3		164		20		31		36		5			15		312		165.0	
9/4/2022	22	60	11.1		161		6		21		69		10			15		310		166.4	
9/4/2022	23	60	11.2		164		8		20		61		5	6		15	14	308	310	164.0	165.6

Average: Geometric Mean Average:	164	9	<b>OR</b>	68	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 04-Sep-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	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	1	0	0	0	0	0	0	0	0
6	3	IC	5	IC	0	0	0	0	0	0	1
7	0		0	1	1	1	1	1	1	1	0
8	1		1	1	1	1	1	1	1	1	1
9	1		1	1	1	1	1	1	1	1	1
10	1		1	0	0	0	0	0	1	0	0
11	1		1	1	1	1	1	1	1	1	1
12	1		1	1	1	1	1	1	1	1	1
13	1		0	1	1	0	0	0	0	0	0
14	0		0	0	0	0	1	1	1	1	0
15	0		0	0	0	0	0	0	0	0	0
16	0		0	0	0	0	0	0	0	0	0
17	0		0	0	0	0	0	0	0	0	0
18	0		0	0	0	0	0	0	0	0	0
19	0		0	0	1	1	0	0	0	1	0
20	0		0	0	0	0	0	0	0	0	0
21	0		0	0	0	0	0	0	0	0	0
22	0		0	0	0	0	0	0	0	0	0
23	0		0	0	0	0	0	0	0	0	0

**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 04-Sep-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	3	2	2	2	2	2	3	3	3	2	2
1	2	3	3	3	3	3	3	3	3	3	3
2	3	3	3	3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3	3	3	3	3
4	3	3	3	3	3	3	3	3	3	3	3
5	3	3	3	3	2	2	2	2	2	2	3
6	2	IBC	6	IBC	2	2	2	3	3	2	3
7	3	3	3	3	3	3	3	2	2	3	3
8	2	2	2	2	2	2	2	3	3	2	2
9	3	3	3	3	3	3	3	3	3	3	3
10	2	3	2	3	3	3	3	3	3	3	3
11	3	3	3	3	3	3	3	3	3	3	3
12	3	3	3	3	3	3	2	2	3	3	3
13	2	2	2	3	2	2	2	3	3	2	2
14	3	3	3	3	2	2	2	3	2	2	2
15	2	2	2	2	2	3	3	3	3	3	2
16	3	3	2	2	2	2	2	2	3	2	2
17	3	3	3	3	3	3	3	3	3	3	3
18	2	3	2	2	2	2	2	2	2	2	2
19	2	2	2	2	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	3	2	2	2	3	2
23	2	2	2	2	2	2	2	2	2	2	2

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