



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



Date 3/7/22

Wheel Plant Wheelabrator North Andover  
Unit 1 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.
3/7/2022	0	60	10.0		194		29		101		71		4			13		309		165.9	
3/7/2022	1	60	10.2		190		31		120		74		4			15		309		164.3	
3/7/2022	2	60	10.0		191		26		97		73		4			15		309		167.5	
3/7/2022	3	60	10.2		198		23		70		68		4	4		14		309	309	165.4	165.8
3/7/2022	4	60	10.1		194		20		74		73		4			14		310		165.4	
3/7/2022	5	60	10.1		192		17		70		76		4			12		309		167.4	
3/7/2022	6	60	10.0		187		16		57		72		4			16		309		166.1	
3/7/2022	7	60	10.0		186		15		50		70		3	4		8	14	310	309	165.7	166.1
3/7/2022	8	60	10.1		189		10		36		71		4			13		309		162.5	
3/7/2022	9	60	10.1		194		23		65		65		4			17		309		165.5	
3/7/2022	10	60	9.9		185		20		46		56		5			17		310		165.6	
3/7/2022	11	60	10.2		182		14		38		64		5	5		16		309	309	163.1	164.2
3/7/2022	12	60	10.1		196		22		58		62		6			17		310		164.8	
3/7/2022	13	60	9.9		193		26		74		65		6			16		310		167.6	
3/7/2022	14	60	10.2		186		20		47		58		3			15		309		167.7	
3/7/2022	15	60	10.5		191		24		55		57		2	4		12	15	309	309	166.2	166.6
3/7/2022	16	60	10.2		196		17		39		58		4			13		310		164.5	
3/7/2022	17	60	10.0		199		27		88		69		4			12		309		166.1	
3/7/2022	18	60	10.3		198		23		65		65		2			15		309		166.2	
3/7/2022	19	60	10.1		198		24		59		59		3	3		11		310	309	164.4	165.3
3/7/2022	20	60	10.0		199		17		54		68		2			14		309		165.4	
3/7/2022	21	60	10.1		198		23		59		60		3			11		309		164.6	
3/7/2022	22	60	10.2		195		22		41		48		3			10		309		164.8	
3/7/2022	23	60	10.1		197		20		45		54		3	3		17	13	310	309	164.3	164.8

Average: Geometric Mean Average:	193	21	<b>OR</b>	66	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 3/7/22

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.
3/7/2022	0	60	8.9		175		20		50		59		1			15		305		167.0	
3/7/2022	1	60	8.7		182		22		63		66		0			15		305		170.0	
3/7/2022	2	60	8.9		183		26		59		57		1			14		305		167.4	
3/7/2022	3	60	8.9		178		20		63		68		1	I		13		305	305	167.8	168.1
3/7/2022	4	60	8.8		181		14		48		72		2			14		305		169.8	
3/7/2022	5	60	8.9		173		21		28		23		2			6		305		164.5	
3/7/2022	6	60	8.7		174		19		22		13		2			14		305		169.1	
3/7/2022	7	60	9.0		174		4		7		36		2	2		15	13	305	305	166.1	167.4
3/7/2022	8	60	9.1		157		0		0		22		3			17		305		155.0	
3/7/2022	9	60	8.9		186		6		0		0		2			13		305		166.5	
3/7/2022	10	60	8.8		184		1		2		40		2			13		305		166.4	
3/7/2022	11	60	8.8		186		7		2		0		3	3		16		310	306	166.2	163.5
3/7/2022	12	60	8.7		179		9		18		51		3			12		309		166.6	
3/7/2022	13	60	9.0		191		14		19		26		2			13		305		166.4	
3/7/2022	14	60	9.3		165		11		19		40		1			14		306		166.4	
3/7/2022	15	60	9.0		190		11		18		42		1	2		12	14	308	307	166.4	166.5
3/7/2022	16	60	9.0		191		5		6		12		3			16		305		166.3	
3/7/2022	17	60	9.0		191		3		5		43		3			11		305		166.1	
3/7/2022	18	60	9.0		182		22		49		56		2			15		305		167.1	
3/7/2022	19	60	9.2		184		25		68		64		1	2		13		304	305	165.7	166.3
3/7/2022	20	60	9.0		185		17		33		50		1			13		305		167.7	
3/7/2022	21	60	9.0		184		24		66		64		1			16		305		166.9	
3/7/2022	22	60	9.1		180		18		36		50		2			11		305		167.0	
3/7/2022	23	60	9.1		178		10		7		0		2	1		15	14	305	305	166.4	167.0

Average:  
Geometric Mean Average:

Limit:

181	9
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

30
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≤ 12 8-HR. Block Average

lb/hr

see above
≤ 345 4-HR Block Average

°F

see above
≤ 173 4-HR Block Average

klb/hr

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



Date 07-Mar-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	2	2	2	2	2	2	2	2	2	2	2
1	2	2	2	2	2	2	2	2	2	2	2
2	2	1	2	1	2	2	2	2	2	2	1
3	2	2	2	2	1	1	1	2	2	1	1
4	2	2	2	2	2	1	2	1	2	1	1
5	2	2	2	2	2	2	1	1	1	2	1
6	2	IC	6	IC	2	2	2	2	2	2	2
7	2	1	2	2	2	2	2	2	2	2	1
8	2	2	2	2	2	2	2	2	2	2	2
9	2	2	2	2	2	2	2	2	2	2	2
10	2	2	2	2	2	2	2	2	2	2	2
11	2	2	2	2	2	2	2	2	2	2	2
12	2	2	2	2	2	2	2	2	2	2	2
13	2	2	2	2	2	2	2	2	2	2	2
14	2	2	2	2	2	2	2	2	2	2	2
15	1	1	1	1	1	1	1	1	2	1	1
16	2	2	1	1	1	1	2	2	1	1	1
17	1	2	1	1	2	1	1	1	2	1	1
18	2	2	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	2	2	2	2	2	2
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 07-Mar-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	2	2	2	2	2	2	2	2	2	2	2
1	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2
3	2	2	2	2	2	2	2	2	2	2	2
4	2	2	2	2	2	2	2	2	2	2	2
5	2	2	2	2	2	2	2	2	2	2	2
6	2	IBC	6	IBC	2	2	2	2	2	2	2
7	2	2	2	2	2	2	2	2	2	2	2
8	2	2	2	2	2	2	2	2	2	2	2
9	2	2	2	2	2	2	2	2	2	2	2
10	2	2	2	2	2	2	2	2	2	2	2
11	2	2	2	2	2	2	2	2	2	2	2
12	2	2	2	2	2	2	2	2	2	2	2
13	2	2	2	2	2	2	2	2	2	2	2
14	2	2	2	2	2	2	2	2	2	2	2
15	2	2	2	2	2	2	2	2	2	2	2
16	2	2	2	2	2	2	2	2	2	2	2
17	2	2	2	2	2	2	2	2	2	2	2
18	2	2	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	2	2	2	2	2	2
23	2	2	2	2	2	2	2	2	2	2	2

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