



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



Date 2/15/22

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.
2/15/2022	0	60	9.8		199		2		0		0		5			13		309		165.9	
2/15/2022	1	60	9.7		193		4		6		31		6			13		309		166.0	
2/15/2022	2	60	9.6		197		9		14		37		6			13		309		165.6	
2/15/2022	3	60	9.7		192		10		14		31		7	6		13		309	309	165.5	165.8
2/15/2022	4	60	9.6		194		10		16		38		6			13		309		165.4	
2/15/2022	5	60	9.7		194		7		1		0		6			13		309		163.7	
2/15/2022	6	60	9.8		199		5		0		0		5			13		309		164.8	
2/15/2022	7	60	9.9		196		6		2		0		7	6		13	13	309	309	163.9	164.4
2/15/2022	8	60	10.0		190		6		3		0		10			13		309		166.3	
2/15/2022	9	60	10.4		197		5		3		0		7			13		309		165.9	
2/15/2022	10	60	10.0		198		8		10		17		8			13		309		165.9	
2/15/2022	11	57	10.3		197		12		12		0		8	8		13		310	309	166.7	166.2
2/15/2022	12	60	10.2		197		8		11		29		7			14		310		166.3	
2/15/2022	13	60	10.3		193		8		21		62		8			14		309		164.3	
2/15/2022	14	60	10.4		195		12		29		58		6			13		309		165.2	
2/15/2022	15	60	10.0		197		8		24		67		6	7		13	13	310	309	167.0	165.7
2/15/2022	16	60	10.2		198		17		60		71		6			13		309		165.4	
2/15/2022	17	60	10.3		196		17		57		70		6			13		309		166.0	
2/15/2022	18	60	10.2		199		22		81		73		6			14		310		167.5	
2/15/2022	19	60	10.2		200		34		134		74		6	6		13		309	309	165.2	166.0
2/15/2022	20	60	10.2		197		26		111		77		6			13		310		165.6	
2/15/2022	21	60	10.2		199		15		60		75		6			13		309		166.4	
2/15/2022	22	60	10.1		199		14		61		76		7			14		309		165.8	
2/15/2022	23	60	10.1		198		14		55		74		6	6		13	13	309	309	165.4	165.8

Average:  
Geometric Mean Average:

Limit:

196	10
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

19
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≤ 12 8-HR. Block Average

lb/hr

see above
≤ 345 °F 4-HR Block Average

°F

see above
≤ 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



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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.
2/15/2022	0	60	9.8		198		4		10		63		2			13		310		167.1	
2/15/2022	1	60	9.6		199		5		18		71		2			13		310		166.9	
2/15/2022	2	60	9.7		196		8		23		64		2			13		310		166.3	
2/15/2022	3	60	9.8		196		9		26		66		2	2		13		310	310	165.0	166.4
2/15/2022	4	60	9.5		190		9		27		67		1			13		309		166.9	
2/15/2022	5	60	9.6		196		12		25		53		1			13		310		165.5	
2/15/2022	6	60	9.6		196		6		17		65		1			13		310		166.6	
2/15/2022	7	60	9.6		195		14		24		42		3	2		13	13	309	310	165.9	166.3
2/15/2022	8	60	9.8		186		22		32		33		2			13		310		167.1	
2/15/2022	9	60	9.8		192		24		50		51		5			13		310		166.5	
2/15/2022	10	60	9.4		193		5		18		71		4			13		310		166.4	
2/15/2022	11	60	9.5		196		9		33		73		4	4		13		310	310	167.9	167.0
2/15/2022	12	60	9.4		195		8		34		76		4			13		310		165.8	
2/15/2022	13	60	9.3		194		3		27		88		2			13		309		166.4	
2/15/2022	14	60	9.4		191		4		37		89		3			13		310		166.0	
2/15/2022	15	60	9.0		195		2		32		93		4	3		13	13	310	310	165.5	165.9
2/15/2022	16	60	9.0		195		20		101		81		2			13		309		166.7	
2/15/2022	17	60	9.0		197		9		57		84		2			13		310		167.2	
2/15/2022	18	60	9.3		194		6		43		86		2			13		310		166.9	
2/15/2022	19	60	9.5		195		20		95		79		3	2		13		310	310	166.9	166.9
2/15/2022	20	60	9.4		196		14		72		81		2			13		310		166.4	
2/15/2022	21	60	9.7		195		7		47		86		2			14		310		166.9	
2/15/2022	22	60	9.7		194		5		41		88		2			13		310		167.0	
2/15/2022	23	60	9.4		195		6		46		87		2	2		13	13	310	310	165.9	166.6

Average:  
Geometric Mean Average:

Limit:

194	8
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

76
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

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lb/hr

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



Date 15-Feb-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	1	1	1	1	2	2	1	1	1
1	1	2	2	1	2	1	1	2	1	1	1
2	1	1	1	2	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	2	1	1	1	1	1	1	1
6	2	IC	6	IC	2	1	2	1	1	1	2
7	2		2	1	2	2	2	2	2	2	1
8	2		2	2	2	2	2	1	1	2	1
9	1		1	1	1	2	2	2	2	2	1
10	1		2	2	2	2	2	2	1	2	1
11	1		1	1	1	1	I	1	1	1	1
12	1		1	1	1	2	2	2	2	2	1
13	2		2	1	1	2	2	2	2	2	1
14	2		2	2	2	2	2	2	2	2	2
15	2		2	1	2	1	2	2	2	2	1
16	1		2	2	1	1	2	1	1	2	1
17	1		1	1	1	1	1	1	1	1	1
18	1		1	1	1	1	1	1	1	1	1
19	1		1	1	1	1	1	1	1	1	1
20	1		1	1	1	1	1	1	1	1	1
21	1		1	1	1	1	1	1	1	1	1
22	1		1	1	2	1	1	1	1	1	1
23	2		2	1	2	1	2	2	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 15-Feb-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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