



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



Date 2/16/22

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.
2/16/2022	0	60	10.0		193		10		48		79		6			13		310		166.6	
2/16/2022	1	60	10.2		200		6		30		79		5			13		309		166.9	
2/16/2022	2	60	10.2		198		5		24		80		5			13		309		165.2	
2/16/2022	3	60	10.2		202		7		26		73		5	5		14		309	309	167.7	166.6
2/16/2022	4	60	10.2		193		6		27		76		5			13		309		167.6	
2/16/2022	5	60	10.2		196		9		19		53		5			13		309		164.4	
2/16/2022	6	60	10.1		198		8		21		62		6			13		310		165.7	
2/16/2022	7	60	10.0		197		7		20		64		7	6		14	13	309	309	166.1	165.9
2/16/2022	8	60	10.3		182		12		30		62		6			13		309		166.2	
2/16/2022	9	60	10.2		197		10		34		69		6			14		309		166.1	
2/16/2022	10	60	10.1		199		14		33		59		6			13		309		166.1	
2/16/2022	11	60	10.2		198		20		74		74		6	6		13		310	309	166.8	166.3
2/16/2022	12	60	10.1		196		7		26		75		6			13		309		166.1	
2/16/2022	13	60	10.1		199		17		38		55		7			13		309		166.6	
2/16/2022	14	60	10.1		198		3		19		82		7			13		310		164.1	
2/16/2022	15	60	10.2		198		4		23		81		6	7		13	13	309	309	165.7	165.6
2/16/2022	16	60	10.2		198		8		40		80		6			13		309		166.0	
2/16/2022	17	60	10.2		197		9		36		76		5			13		309		165.6	
2/16/2022	18	60	10.1		196		9		33		74		6			14		310		165.7	
2/16/2022	19	60	10.2		197		7		32		80		6	6		14		309	309	164.7	165.5
2/16/2022	20	60	10.3		196		8		34		75		5			13		309		164.5	
2/16/2022	21	60	10.3		201		22		66		66		6			13		309		165.1	
2/16/2022	22	60	10.2		196		22		93		77		6			13		309		165.8	
2/16/2022	23	60	10.2		194		19		80		76		6	6		13	13	309	309	166.7	165.5

Average:
Geometric Mean Average:

Limit:

197	9
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

73
≥ 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

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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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.
2/16/2022	0	60	9.4		194		7		48		85		2			13		310		166.8	
2/16/2022	1	60	9.5		193		3		31		89		1			13		310		165.9	
2/16/2022	2	60	9.6		194		3		30		88		2			13		310		166.9	
2/16/2022	3	60	9.5		197		3		31		90		2	2		13		310	310	166.8	166.6
2/16/2022	4	60	9.6		190		3		30		89		1			13		310		166.5	
2/16/2022	5	60	9.4		189		8		48		82		1			13		310		167.3	
2/16/2022	6	60	9.7		192		3		26		87		2			13		310		165.5	
2/16/2022	7	60	9.6		193		4		30		87		2	2		13	13	310	310	166.0	166.3
2/16/2022	8	60	9.7		187		5		33		85		2			14		310		166.1	
2/16/2022	9	60	9.6		194		7		46		85		3			14		310		165.5	
2/16/2022	10	60	9.3		198		4		29		88		3			13		310		166.8	
2/16/2022	11	60	9.3		194		7		29		77		3	3		13		310	310	167.3	166.4
2/16/2022	12	60	9.3		178		4		24		82		1			13		310		166.5	
2/16/2022	13	60	9.3		184		2		22		91		2			13		309		166.5	
2/16/2022	14	60	9.1		186		2		32		94		2			13		310		166.6	
2/16/2022	15	60	9.2		195		2		30		93		2	2		13	13	310	310	167.4	166.8
2/16/2022	16	60	9.1		196		2		31		93		1			13		310		166.6	
2/16/2022	17	60	9.3		172		3		39		92		2			13		310		163.1	
2/16/2022	18	60	9.0		184		2		32		92		2			13		310		167.2	
2/16/2022	19	60	9.2		186		3		39		93		2	2		13		310	310	166.3	165.8
2/16/2022	20	60	9.2		187		2		29		94		1			13		310		166.3	
2/16/2022	21	60	9.1		192		10		70		85		2			13		310		166.6	
2/16/2022	22	60	9.1		193		10		60		83		2			13		310		166.5	
2/16/2022	23	60	9.1		187		9		57		84		1	2		13	13	310	310	165.9	166.3

Average:
Geometric Mean Average:

Limit:

190	4
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

89
≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

see above
≤ 12 lb/hr 8-HR. Block Average

see above
≤ 345 °F 4-HR Block Average

see above
≤ 173 klb/hr 4-HR Block Average

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 16-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	1	1	1	2	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	2	1	2	2	1	2	2	2	1	1
4	2	2	2	1	1	1	1	1	1	1	1
5	1	1	1	1	1	2	2	2	1	2	1
6	2	IC	6	IC	1	1	1	1	1	1	2
7	1	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	1	1	1	1	1	1	1	1	1	1
12	1	1	2	2	2	2	2	2	2	2	1
13	2	2	2	2	2	2	2	2	2	2	2
14	2	2	2	1	2	2	1	2	2	2	1
15	1	1	1	1	1	1	1	1	2	1	1
16	1	1	2	1	2	1	1	1	1	1	1
17	1	2	2	1	2	1	1	1	2	1	1
18	1	2	2	2	2	2	2	1	1	2	1
19	1	2	2	2	2	2	2	2	2	2	1
20	1	1	1	1	2	2	2	1	2	2	1
21	2	2	1	2	2	2	2	2	2	2	1
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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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 16-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

Status Flags

I - Invalid C - Calibration F - Offline T - Out of Control ^ - Startup
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