



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



Date 4/2/22

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.
4/2/2022	0	60	9.9		195		25		103		76		5			14		310		164.8	
4/2/2022	1	60	10.1		195		19		91		79		3			14		309		164.8	
4/2/2022	2	60	9.8		199		19		76		75		3			14		309		166.1	
4/2/2022	3	60	9.8		196		20		77		74		3	3		14		310	309	167.5	165.8
4/2/2022	4	60	9.8		195		14		57		75		3			14		309		167.2	
4/2/2022	5	60	9.9		198		12		54		79		4			14		310		164.0	
4/2/2022	6	60	10.6		192		18		66		72		5			14		309		154.2	
4/2/2022	7	60	10.9		184		7		49		86		6	4		14	14	309	309	134.0	154.8
4/2/2022	8	60	11.1		171		4		47		91		7			14		309		129.1	
4/2/2022	9	60	11.0		174		4		52		92		6			14		310		128.1	
4/2/2022	10	60	10.8		172		4		48		91		5			14		310		129.1	
4/2/2022	11	60	10.7		170		4		54		92		5	6		14		309	309	130.7	129.2
4/2/2022	12	60	10.9		170		4		56		93		6			14		310		129.2	
4/2/2022	13	60	10.9		172		5		53		90		5			14		309		131.1	
4/2/2022	14	60	10.8		170		9		61		85		4			14		309		130.3	
4/2/2022	15	60	10.7		176		9		62		86		4	5		14	14	309	309	131.4	130.5
4/2/2022	16	60	11.0		175		9		52		83		5			14		310		130.0	
4/2/2022	17	60	11.1		178		16		80		80		6			15		309		128.0	
4/2/2022	18	60	11.1		175		14		57		75		5			14		309		128.2	
4/2/2022	19	60	11.1		176		16		70		77		6	5		14		310	309	127.4	128.4
4/2/2022	20	60	10.1		181		31		138		78		5			14		310		146.5	
4/2/2022	21	60	9.6		193		18		100		82		4			15		308		165.1	
4/2/2022	22	60	9.8		197		20		78		74		4			14		307		170.2	
4/2/2022	23	60	10.0		193		21		94		78		4	4		14	14	309	308	167.4	162.3

Average:
Geometric Mean Average:

Limit:

183	11
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

83
≥ 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



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



Date 4/2/22

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.
4/2/2022	0	60	9.7		194		7		68		90		2			14		310		166.1	
4/2/2022	1	60	9.9		198		7		69		90		3			14		310		164.3	
4/2/2022	2	60	9.9		190		4		52		93		2			14		310		165.4	
4/2/2022	3	60	9.8		185		3		49		93		2	2		14		310	310	166.3	165.5
4/2/2022	4	60	9.8		197		4		45		90		3			14		310		165.4	
4/2/2022	5	60	9.9		184		7		70		90		2			14		310		165.8	
4/2/2022	6	60	10.7		198		3		48		93		3			14		310		152.9	
4/2/2022	7	60	11.3		195		2		40		95		4	3		14	14	310	310	133.8	154.5
4/2/2022	8	60	11.4		193		1		20		97		5			14		310		130.7	
4/2/2022	9	60	11.2		195		1		27		97		4			14		310		129.5	
4/2/2022	10	60	11.0		199		1		27		97		3			15		310		129.3	
4/2/2022	11	60	10.9		190		1		43		98		3	4		13		310	310	130.3	130.0
4/2/2022	12	60	10.9		198		1		51		97		5			15		310		130.0	
4/2/2022	13	60	11.0		197		4		75		95		4			14		310		129.7	
4/2/2022	14	60	11.0		196		1		31		98		3			14		310		129.4	
4/2/2022	15	60	11.1		197		1		49		98		3	4		15	14	310	310	129.9	129.7
4/2/2022	16	60	11.0		193		3		64		95		4			14		310		129.9	
4/2/2022	17	60	11.1		193		1		45		97		3			14		310		128.7	
4/2/2022	18	60	11.0		196		2		50		97		3			15		310		129.8	
4/2/2022	19	60	11.0		196		3		56		94		4	3		14		310	310	130.2	129.7
4/2/2022	20	60	9.7		190		4		61		94		2			14		310		154.4	
4/2/2022	21	60	9.3		191		7		79		91		1			14		310		168.0	
4/2/2022	22	60	9.6		190		6		66		91		1			14		310		167.9	
4/2/2022	23	60	9.7		192		12		86		85		2	1		14	14	310	310	167.7	164.5

Average:
Geometric Mean Average:

Limit:

194	3
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

95
≥ 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 02-Apr-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	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	IC	6	IC	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
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 02-Apr-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	7	IBC	2	2	2	2	2	2	3
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
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown