



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



Date 10/13/22

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.
10/13/2022	0	60	10.4		189		11		34		68		6			14		309		166.0	
10/13/2022	1	60	10.4		193		6		26		79		7			14		310		165.0	
10/13/2022	2	60	10.2		189		9		38		77		6			14		309		166.4	
10/13/2022	3	60	10.1		192		11		47		77		5	6		14		310	309	168.3	166.4
10/13/2022	4	60	10.0		183		2		35		93		4			14		310		167.6	
10/13/2022	5	60	10.1		177		2		35		94		6			14		308		165.5	
10/13/2022	6	60	9.9		171		4		34		88		6			14		307		165.5	
10/13/2022	7	60	10.1		182		4		33		87		5	5		14	14	310	309	162.9	165.4
10/13/2022	8	60	10.0		183		3		28		91		5			14		310		160.4	
10/13/2022	9	60	9.9		177		4		30		88		6			14		311		165.3	
10/13/2022	10	60	10.0		165		13		69		81		7			13		312		165.6	
10/13/2022	11	60	10.2		177		4		28		85		6	6		14		309	310	166.2	164.4
10/13/2022	12	60	10.1		180		2		22		89		8			14		309		165.8	
10/13/2022	13	60	9.9		171		5		33		83		7			14		308		165.6	
10/13/2022	14	60	10.1		169		11		40		71		51			14		310		166.3	
10/13/2022	15	60	9.9		167		2		19		92		7	18		13	14	310	309	164.5	165.5
10/13/2022	16	60	10.3		160		8		33		74		6			13		309		163.5	
10/13/2022	17	60	10.1		167		7		35		81		6			14		309		165.1	
10/13/2022	18	60	10.3		161		7		30		75		5			14		310		166.6	
10/13/2022	19	60	10.2		171		9		37		76		5	5		13		309	309	163.9	164.8
10/13/2022	20	60	10.1		183		6		33		81		5			14		309		164.5	
10/13/2022	21	60	10.1		176		16		56		72		5			14		310		165.4	
10/13/2022	22	60	10.1		180		11		37		70		5			13		310		165.7	
10/13/2022	23	60	10.0		168		6		33		82		5	5		14	14	309	309	165.4	165.3

Average:
Geometric Mean Average:

Limit:

176	6
≤ 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

°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



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



Date 10/13/22

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.
10/13/2022	0	60	11.1		196		21		70		70		6			15		310		165.4	
10/13/2022	1	60	11.1		195		16		55		70		6			15		310		165.1	
10/13/2022	2	60	11.0		199		14		54		74		6			15		310		165.6	
10/13/2022	3	60	11.1		193		14		54		74		6	6		15		310	310	166.4	165.7
10/13/2022	4	60	11.1		195		13		52		74		6			15		310		165.7	
10/13/2022	5	60	11.3		194		10		44		77		5			14		309		161.5	
10/13/2022	6	60	11.4		196		9		37		75		4			14		311		160.6	
10/13/2022	7	60	11.4		196		5		27		83		2	4		14	14	310	310	164.5	163.0
10/13/2022	8	60	11.1		195		5		32		86		5			15		310		165.3	
10/13/2022	9	60	11.3		190		6		33		81		4			14		310		165.2	
10/13/2022	10	60	11.5		184		10		33		71		4			14		310		165.4	
10/13/2022	11	60	11.2		198		6		24		73		6	5		14		310	310	165.7	165.4
10/13/2022	12	60	11.2		198		6		24		73		5			14		310		165.3	
10/13/2022	13	60	11.4		197		16		40		61		4			14		310		165.5	
10/13/2022	14	60	11.3		197		12		38		68		5			14		310		165.3	
10/13/2022	15	60	11.3		198		6		26		76		5	5		14	14	310	310	165.9	165.5
10/13/2022	16	60	11.5		191		14		48		71		3			15		310		165.2	
10/13/2022	17	60	11.4		197		22		64		66		4			14		310		166.4	
10/13/2022	18	60	11.6		194		25		73		66		5			14		310		165.7	
10/13/2022	19	60	11.8		197		32		87		64		4	4		14		310	310	165.4	165.7
10/13/2022	20	60	11.8		197		9		28		67		3			14		310		166.3	
10/13/2022	21	60	11.9		195		16		40		60		4			15		310		164.6	
10/13/2022	22	60	11.8		197		15		38		62		4			14		310		165.8	
10/13/2022	23	60	11.7		193		11		36		70		3	4		14	14	310	310	165.5	165.6

Average:
Geometric Mean Average:

Limit:

195	12
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

72
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 13-Oct-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	1	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	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	1	1	1	1	1	1	1	1
6	3	IC	5	IC	1	1	1	1	1	1	2
7	1	1	1	1	1	1	1	1	1	1	1
8	1	1	1	1	1	1	1	1	1	1	1
9	1	1	1	1	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	1	1	1	1
11	1	1	1	1	1	1	1	1	1	1	1
12	1	1	1	1	1	1	1	1	1	1	1
13	1	1	1	1	1	1	1	1	1	1	1
14	1	1	1	1	1	1	1	1	1	1	1
15	1	1	1	1	1	1	1	1	1	1	1
16	1	1	1	1	1	1	1	1	1	1	1
17	1	1	1	1	1	1	1	1	1	1	1
18	1	1	1	1	1	1	1	1	1	1	1
19	1	1	1	1	1	1	1	1	1	1	1
20	1	1	1	1	1	1	1	1	1	1	1
21	1	1	1	1	1	1	1	1	1	1	1
22	1	1	1	1	1	1	1	1	1	1	1
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 13-Oct-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	1	1	1	1	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	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	1	1	1	1	1	1	1	1
6	2	IBC	5	IBC	1	1	1	1	1	1	1
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	1	2	2	2	1	1	1	1	1	1
11	1	1	1	1	1	1	1	2	1	1	1
12	1	1	2	1	1	2	2	2	2	2	1
13	2	2	2	2	2	2	2	2	2	2	2
14	2	2	2	2	1	2	2	2	2	2	2
15	2	2	2	2	2	2	1	1	1	2	2
16	2	2	1	1	1	2	1	1	2	2	1
17	2	2	2	2	2	2	2	2	2	2	2
18	2	2	2	2	2	2	1	1	1	2	1
19	1	1	1	1	1	1	1	1	1	1	1
20	1	1	1	1	1	1	1	1	1	1	1
21	1	1	1	1	1	1	1	1	1	1	1
22	1	1	1	1	1	1	1	1	1	1	1
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