



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



Date 4/1/22

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.
4/1/2022	0	60	10.4		193		17		52		67		4			14		309		163.5	
4/1/2022	1	60	10.4		195		21		76		72		4			14		309		162.7	
4/1/2022	2	60	10.2		197		20		59		66		4			14		309		165.3	
4/1/2022	3	60	10.0		198		18		56		68		5	4		14		310	309	166.6	164.5
4/1/2022	4	60	10.1		197		20		60		67		4			14		309		165.9	
4/1/2022	5	60	10.0		198		18		51		65		4			14		309		168.4	
4/1/2022	6	60	10.1		192		16		46		65		4			14		309		167.8	
4/1/2022	7	60	9.5		190		6		35		84		5	5		15	14	310	309	166.6	167.2
4/1/2022	8	60	10.0		192		15		63		77		5			14		308		164.2	
4/1/2022	9	60	9.8		189		14		71		80		4			15		310		167.1	
4/1/2022	10	60	10.1		185		11		55		79		4			14		309		165.4	
4/1/2022	11	60	9.9		195		14		73		81		3	4		14		309	309	166.2	165.7
4/1/2022	12	60	9.9		192		20		87		77		4			14		310		164.3	
4/1/2022	13	60	9.7		194		16		77		79		4			14		309		167.1	
4/1/2022	14	60	9.6		196		15		62		76		4			14		309		164.9	
4/1/2022	15	60	9.6		196		14		59		77		5	4		14	14	310	310	164.7	165.2
4/1/2022	16	60	9.7		183		13		80		84		5			14		309		166.9	
4/1/2022	17	60	10.2		192		14		85		84		4			14		310		162.2	
4/1/2022	18	60	10.2		195		38		160		76		4			14		309		162.8	
4/1/2022	19	60	10.1		198		26		116		78		4	4		14		310	309	164.4	164.1
4/1/2022	20	60	10.1		192		19		79		76		5			14		309		164.4	
4/1/2022	21	60	10.0		192		17		71		75		4			14		310		167.1	
4/1/2022	22	60	10.1		194		16		64		74		3			14		309		164.0	
4/1/2022	23	60	9.9		197		12		63		80		3	4		14	14	309	309	165.5	165.3

Average:
Geometric Mean Average:

Limit:

193	16
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

76
≥ 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

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 4/1/22

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.
4/1/2022	0	60	9.0		154		3		41		93		2			15		310		165.8	
4/1/2022	1	60	9.1		155		2		38		94		2			13		310		165.4	
4/1/2022	2	60	9.1		156		3		48		94		2			14		310		165.8	
4/1/2022	3	60	9.1		152		4		44		90		2	2		14		310	310	165.6	165.7
4/1/2022	4	60	8.9		152		9		58		85		4			13		310		167.1	
4/1/2022	5	60	9.1		159		7		59		89		3			14		310		164.9	
4/1/2022	6	60	9.1		149		9		54		83		2			14		310		166.0	
4/1/2022	7	60	9.0		168		4		50		91		2	3		14	14	311	310	162.9	165.2
4/1/2022	8	60	9.3		176		12		99		88		3			14		310		165.6	
4/1/2022	9	60	9.5		185		1		32		98		4			14		310		165.8	
4/1/2022	10	60	9.7		184		4		70		94		4			14		310		165.6	
4/1/2022	11	60	9.6		185		1		52		98		2	3		15		310	310	165.4	165.6
4/1/2022	12	60	9.7		190		5		56		92		2			14		310		166.1	
4/1/2022	13	60	9.6		189		4		55		93		2			14		310		166.4	
4/1/2022	14	60	9.2		194		2		51		97		3			15		310		167.8	
4/1/2022	15	60	9.5		186		2		53		96		2	2		15	14	310	310	165.1	166.4
4/1/2022	16	60	9.8		181		1		40		97		2			15		310		165.8	
4/1/2022	17	60	9.8		192		12		89		86		2			15		310		165.4	
4/1/2022	18	60	9.8		187		33		155		79		2			15		310		165.6	
4/1/2022	19	60	9.9		183		14		88		84		3	2		14		310	310	165.5	165.6
4/1/2022	20	60	9.8		193		8		74		89		2			15		310		165.4	
4/1/2022	21	60	9.8		181		3		45		94		2			15		310		166.2	
4/1/2022	22	60	9.9		186		1		42		97		1			15		310		165.5	
4/1/2022	23	60	9.8		182		3		57		94		2	2		14	15	310	310	166.2	165.8

Average:
Geometric Mean Average:

Limit:

176	4
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

93
≥ 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 01-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 01-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	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
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown