



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



Date 4/9/22

Wheel Plant Wheelabrator North Andover
Unit 1 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.
4/9/2022	0	60	9.8		193		22		67		67		6			14		312		169.5	
4/9/2022	1	60	10.0		196		14		69		79		5			13		303		166.0	
4/9/2022	2	60	10.2		195		23		84		72		5			14		310		165.6	
4/9/2022	3	60	10.0		196		18		64		72		5	5		14		308	308	166.2	166.8
4/9/2022	4	60	10.1		195		21		67		69		5			14		311		165.0	
4/9/2022	5	60	10.0		189		19		74		74		5			14		308		163.5	
4/9/2022	6	60	9.8		189		18		67		73		5			14		311		167.2	
4/9/2022	7	60	9.8		198		19		61		70		5	5		14	14	307	309	165.1	165.2
4/9/2022	8	60	9.8		196		15		51		70		5			14		309		166.2	
4/9/2022	9	60	9.8		195		16		40		61		6			14		314		168.3	
4/9/2022	10	60	9.7		195		13		43		69		7			14		305		167.3	
4/9/2022	11	60	9.4		198		23		55		58		6	6		14		306	308	166.0	167.0
4/9/2022	12	60	10.0		197		22		46		52		6			14		313		165.5	
4/9/2022	13	60	9.9		200		19		54		65		6			14		308		165.7	
4/9/2022	14	60	10.0		197		17		43		62		4			14		313		165.9	
4/9/2022	15	60	9.8		197		17		41		59		5	5		14	14	311	311	166.8	166.0
4/9/2022	16	60	10.0		192		15		47		68		5			13		309		167.5	
4/9/2022	17	60	10.0		199		20		56		65		4			13		304		164.9	
4/9/2022	18	60	10.0		199		23		51		56		4			13		310		165.9	
4/9/2022	19	60	10.0		197		23		62		63		4	4		13		311	309	166.4	166.2
4/9/2022	20	60	10.0		197		24		57		59		4			13		310		165.3	
4/9/2022	21	60	10.1		197		23		65		64		3			13		305		165.3	
4/9/2022	22	60	10.0		197		23		59		60		3			13		307		167.6	
4/9/2022	23	60	9.9		194		21		55		62		4	4		13	13	311	308	165.2	165.8

Average:
Geometric Mean Average:

Limit:

196	19
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

66
≥ 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 4/9/22

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.
4/9/2022	0	60	9.5		192		23		114		80		3			15		310		167.8	
4/9/2022	1	60	9.5		192		16		106		85		2			16		310		168.5	
4/9/2022	2	60	9.7		191		7		85		91		2			16		310		167.6	
4/9/2022	3	60	9.8		187		7		80		91		2	2		16		310	310	167.4	167.8
4/9/2022	4	60	9.9		194		5		74		93		3			16		310		166.0	
4/9/2022	5	60	9.6		197		8		81		91		2			15		310		168.1	
4/9/2022	6	60	9.5		197		7		85		91		1			15		310		166.9	
4/9/2022	7	60	9.4		189		5		61		93		2	2		14	15	310	310	167.3	167.1
4/9/2022	8	60	9.5		186		5		70		93		2			14		310		167.7	
4/9/2022	9	60	9.6		194		2		49		95		4			15		310		167.6	
4/9/2022	10	60	9.8		195		2		44		96		3			14		310		167.5	
4/9/2022	11	60	9.6		191		3		58		95		3	3		14		310	310	167.0	167.4
4/9/2022	12	60	9.7		190		5		64		92		1			13		310		168.3	
4/9/2022	13	60	9.7		185		8		67		88		1			13		310		168.3	
4/9/2022	14	60	9.7		186		5		61		92		2			14		310		167.5	
4/9/2022	15	60	9.8		191		4		61		94		1	1		14	14	310	310	167.8	168.0
4/9/2022	16	60	9.7		194		5		68		92		1			13		310		168.3	
4/9/2022	17	60	9.7		193		6		69		91		1			13		310		166.4	
4/9/2022	18	60	9.5		193		10		79		87		1			14		310		168.2	
4/9/2022	19	60	9.6		198		6		72		91		2	1		13		310	310	167.7	167.7
4/9/2022	20	60	9.9		190		8		70		88		1			13		310		166.5	
4/9/2022	21	60	9.9		193		12		79		84		1			13		310		167.8	
4/9/2022	22	60	9.9		195		14		82		83		1			14		310		166.4	
4/9/2022	23	60	9.6		190		11		75		86		1	1		13	13	310	310	167.8	167.1

Average:
Geometric Mean Average:

Limit:

192	7
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

91
≥ 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

Status Flags

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 09-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

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F - Offline
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T - Out of Control
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^ - Startup
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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 09-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	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