



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



Date 4/21/22

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.
4/21/2022	0	60	9.6		193		5		60		91		4			13		298		166.9	
4/21/2022	1	60	9.6		193		5		53		91		3			13		296		170.0	
4/21/2022	2	60	9.6		199		17		53		68		3			13		306		168.6	
4/21/2022	3	60	9.5		194		17		61		72		3	4		13		307	302	165.8	167.8
4/21/2022	4	60	9.3		196		18		61		71		3			13		307		166.2	
4/21/2022	5	60	9.5		196		21		72		70		3			13		313		167.7	
4/21/2022	6	60	9.6		196		23		64		64		4			13		314		165.8	
4/21/2022	7	60	9.6		196		23		54		57		4	3		13	13	317	313	168.3	167.0
4/21/2022	8	60	9.8		192		19		40		52		4			13		310		166.8	
4/21/2022	9	60	9.8		181		13		40		68		3			13		306		165.1	
4/21/2022	10	60	10.2		187		26		62		58		4			13		310		166.1	
4/21/2022	11	60	9.9		194		14		49		72		4	4		13		309	309	167.5	166.4
4/21/2022	12	60	9.9		196		11		50		79		4			13		302		166.4	
4/21/2022	13	60	9.5		197		43		151		71		6			13		315		170.7	
4/21/2022	14	60	9.6		196		18		76		77		4			13		308		167.9	
4/21/2022	15	60	9.7		196		15		52		70		4	5		13	13	304	307	165.6	167.6
4/21/2022	16	60	9.7		192		2		46		95		4			13		298		164.6	
4/21/2022	17	60	9.7		199		9		50		83		3			13		298		166.4	
4/21/2022	18	60	9.6		196		19		43		56		4			13		313		169.6	
4/21/2022	19	60	9.6		195		20		54		63		4	4		13		308	304	168.6	167.3
4/21/2022	20	60	9.6		195		12		49		76		3			13		298		166.4	
4/21/2022	21	60	9.6		190		14		49		72		3			13		300		166.8	
4/21/2022	22	60	9.3		187		5		34		85		4			14		301		166.8	
4/21/2022	23	60	9.3		193		5		31		83		4	4		14	13	304	301	166.5	166.6

Average:
Geometric Mean Average:

Limit:

194	13
≤ 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 4/21/22

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.
4/21/2022	0	60	10.1		185		0		65		100		4			15		310		167.4	
4/21/2022	1	60	10.0		193		2		60		97		3			15		310		168.1	
4/21/2022	2	60	10.1		191		1		58		99		3			11		310		167.5	
4/21/2022	3	60	10.2		188		1		64		99		2	3		11		310	310	167.3	167.6
4/21/2022	4	60	9.9		193		0		69		100		4			12		310		167.9	
4/21/2022	5	60	10.2		188		2		79		98		2			12		310		167.6	
4/21/2022	6	60	10.1		193		2		76		97		4			15		310		166.6	
4/21/2022	7	60	10.1		199		0		54		100		5	4		14	13	310	310	168.0	167.5
4/21/2022	8	60	10.3		193		0		45		100		3			14		310		167.2	
4/21/2022	9	60	10.3		190		0		45		99		3			13		310		167.0	
4/21/2022	10	60	10.3		197		2		66		97		2			13		309		169.3	
4/21/2022	11	60	10.2		176		1		67		99		1	2		13		310	310	167.2	167.7
4/21/2022	12	60	10.0		192		2		83		97		4			12		310		166.9	
4/21/2022	13	60	10.0		200		3		88		96		3			12		310		168.1	
4/21/2022	14	60	9.9		192		3		61		92		3			13		310		167.7	
4/21/2022	15	60	9.8		198		0		54		100		3	3		15	13	310	310	168.2	167.7
4/21/2022	16	60	9.8		183		0		51		100		3			14		310		166.9	
4/21/2022	17	60	9.9		198		0		53		100		3			14		310		167.6	
4/21/2022	18	60	9.9		196		0		53		99		4			14		310		167.8	
4/21/2022	19	60	9.9		188		1		45		99		3	3		14		310	310	167.9	167.6
4/21/2022	20	60	10.0		193		0		41		100		2			14		310		167.0	
4/21/2022	21	60	9.9		193		0		40		100		4			14		310		166.7	
4/21/2022	22	60	9.9		186		0		41		100		3			14		310		167.8	
4/21/2022	23	60	9.8		193		1		37		96		2	3		14	14	310	310	167.5	167.3

Average:
Geometric Mean Average:

Limit:

192	0
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

99
≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 21-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 21-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