



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



Date 3/31/22

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.
3/31/2022	0	60	10.2		187		22		62		64		5			14		310		165.8	
3/31/2022	1	60	10.6		187		23		61		62		5			14		309		163.2	
3/31/2022	2	60	10.3		191		23		62		63		5			15		309		166.0	
3/31/2022	3	60	10.3		199		24		57		58		4	5		14		309	309	166.6	165.4
3/31/2022	4	60	10.4		188		19		61		69		5			14		309		164.3	
3/31/2022	5	60	10.2		191		24		57		59		4			15		309		165.9	
3/31/2022	6	60	10.1		192		22		57		61		4			14		310		165.4	
3/31/2022	7	60	10.3		189		29		76		62		5	5		15	14	310	309	164.5	165.0
3/31/2022	8	60	10.6		198		24		75		68		3			14		309		166.6	
3/31/2022	9	60	10.9		196		24		74		67		2			15		309		164.5	
3/31/2022	10	60	10.5		198		19		70		72		3			12		309		164.7	
3/31/2022	11	60	10.3		197		25		64		61		4	3		12		309	309	163.4	164.8
3/31/2022	12	60	10.3		196		21		74		72		5			13		310		165.9	
3/31/2022	13	60	10.1		195		20		79		74		6			15		309		163.7	
3/31/2022	14	60	10.3		195		17		48		63		6			15		309		163.3	
3/31/2022	15	60	10.2		196		16		50		68		6	6		15	14	309	309	163.9	164.2
3/31/2022	16	60	10.0		195		5		34		85		5			15		309		165.3	
3/31/2022	17	60	10.2		196		13		54		75		5			14		309		165.6	
3/31/2022	18	60	10.6		192		21		74		71		4			14		309		163.0	
3/31/2022	19	60	10.4		192		9		43		80		4	5		14		309	309	164.4	164.6
3/31/2022	20	60	10.2		198		16		53		70		5			14		310		165.4	
3/31/2022	21	60	10.4		195		20		60		66		5			14		309		163.5	
3/31/2022	22	60	10.2		195		17		53		68		4			14		310		166.0	
3/31/2022	23	60	10.0		195		16		48		67		5	5		14	14	309	309	166.3	165.3

Average:
Geometric Mean Average:

Limit:

194	19
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

68
≥ 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 3/31/22

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.
3/31/2022	0	60	9.1		162		11		76		86		2			15		310		165.7	
3/31/2022	1	60	9.3		172		13		71		82		1			15		310		165.9	
3/31/2022	2	60	9.1		172		11		79		86		2			15		310		165.4	
3/31/2022	3	60	9.0		173		6		61		91		1	1		15		310	310	166.3	165.8
3/31/2022	4	60	9.1		162		4		46		92		3			15		310		165.0	
3/31/2022	5	60	9.1		155		7		64		90		2			15		310		166.1	
3/31/2022	6	60	9.2		170		13		67		81		2			15		310		165.1	
3/31/2022	7	60	9.2		175		11		69		84		2	2		15	15	310	310	165.6	165.4
3/31/2022	8	60	9.5		179		11		65		82		1			15		310		165.4	
3/31/2022	9	60	9.4		164		4		46		91		4			20		310		166.4	
3/31/2022	10	60	9.3		154		6		59		90		2			6		310		164.8	
3/31/2022	11	60	9.4		158		3		32		92		2	2		11		310	310	166.6	165.8
3/31/2022	12	60	9.2		161		8		74		90		3			14		310		164.7	
3/31/2022	13	60	9.0		158		4		53		93		3			14		310		165.3	
3/31/2022	14	60	9.2		172		2		39		95		4			14		310		166.1	
3/31/2022	15	60	9.2		163		3		49		93		3	3		13	13	310	310	164.3	165.1
3/31/2022	16	60	9.1		167		2		23		92		1			13		310		165.0	
3/31/2022	17	60	8.9		165		2		40		96		2			14		310		165.7	
3/31/2022	18	60	9.0		160		6		60		90		2			12		310		165.0	
3/31/2022	19	60	8.9		154		1		28		95		2	2		14		310	310	166.2	165.5
3/31/2022	20	60	9.1		162		1		36		97		2			13		310		164.5	
3/31/2022	21	60	8.9		163		5		58		91		2			14		310		166.1	
3/31/2022	22	60	9.0		160		6		57		90		10			12		310		166.6	
3/31/2022	23	60	9.2		158		2		33		95		3	4		14	13	309	310	165.0	165.6

Average: Geometric Mean Average:	164	4	OR	91	see above	see above	see above	see above
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 ppmc 4-HR Block Average	≤ 12 lb/hr 8-HR. Block Average	≤ 345 °F 4-HR Block Average	≤ 173 klb/hr 4-HR Block Average

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 31-Mar-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 31-Mar-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