



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



Date 1/3/23

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.
1/3/2023	0	60	10.7		197		9		27		68		4			14		309		166.0	
1/3/2023	1	60	10.7		200		14		34		58		4			15		309		165.7	
1/3/2023	2	60	10.7		198		9		28		68		4			13		310		165.4	
1/3/2023	3	60	10.6		198		15		33		53		4	4		14		310	309	165.7	165.7
1/3/2023	4	60	10.4		203		15		31		51		4			13		309		166.6	
1/3/2023	5	60	10.6		197		18		41		55		4			13		309		168.2	
1/3/2023	6	60	10.4		196		14		39		65		4			13		310		168.1	
1/3/2023	7	60	10.7		196		10		27		61		4	4		14	14	309	309	164.4	166.8
1/3/2023	8	60	10.5		200		12		29		58		4			14		309		167.8	
1/3/2023	9	60	10.8		195		20		39		49		5			14		309		167.8	
1/3/2023	10	60	11.0		201		20		49		58		5			14		309		166.1	
1/3/2023	11	60	11.0		200		21		51		58		4	4		14		309	309	165.9	166.9
1/3/2023	12	60	11.0		194		20		53		62		4			14		309		165.8	
1/3/2023	13	60	10.7		201		15		32		53		4			15		309		166.1	
1/3/2023	14	60	10.9		198		18		43		57		3			14		309		166.6	
1/3/2023	15	60	10.3		200		6		28		80		5	4		13	14	310	309	166.9	166.4
1/3/2023	16	60	10.5		197		9		26		65		5			14		309		166.4	
1/3/2023	17	60	10.3		201		5		23		77		5			15		309		165.5	
1/3/2023	18	60	10.1		198		5		26		79		4			13		309		166.3	
1/3/2023	19	60	10.5		197		9		28		69		4	4		14		309	309	163.9	165.5
1/3/2023	20	60	10.6		196		16		42		62		3			14		309		167.5	
1/3/2023	21	60	10.8		199		21		51		59		3			13		309		167.7	
1/3/2023	22	60	10.8		198		11		38		72		3			14		310		163.5	
1/3/2023	23	60	10.4		199		17		50		66		3	3		13	14	309	309	167.1	166.5

Average:
Geometric Mean Average:

Limit:

198	13
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

64
≥ 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 1/3/23

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.
1/3/2023	0	60	11.1		198		3		11		71		2			14		311		166.1	
1/3/2023	1	60	11.2		197		7		19		62		3			15		311		166.6	
1/3/2023	2	60	11.1		197		5		13		64		3			14		311		166.9	
1/3/2023	3	60	11.1		197		4		12		64		3	3		13		311	311	166.5	166.5
1/3/2023	4	60	11.1		195		7		14		51		5			13		311		166.6	
1/3/2023	5	60	11.1		193		6		18		64		2			13		311		166.3	
1/3/2023	6	60	11.0		195		5		15		64		3			14		311		166.7	
1/3/2023	7	60	11.1		199		7		15		55		3	3		14	14	311	311	167.1	166.7
1/3/2023	8	60	11.6		196		9		16		46		4			12		311		166.5	
1/3/2023	9	60	11.2		197		5		12		58		4			14		311		165.0	
1/3/2023	10	60	11.3		198		10		21		54		3			14		311		166.1	
1/3/2023	11	60	11.2		196		21		52		60		3	3		13		311	311	167.2	166.2
1/3/2023	12	60	11.3		198		10		16		36		3			13		311		164.0	
1/3/2023	13	60	11.1		196		9		16		46		4			15		311		166.8	
1/3/2023	14	60	11.1		197		6		12		52		3			12		311		166.1	
1/3/2023	15	60	11.1		196		5		17		68		3	3		13	13	311	311	167.2	166.0
1/3/2023	16	60	11.0		197		8		13		38		3			14		311		167.3	
1/3/2023	17	60	10.9		197		4		5		26		3			13		311		166.5	
1/3/2023	18	60	10.9		197		3		6		47		3			12		311		166.2	
1/3/2023	19	60	10.9		197		4		8		50		2	3		13		311	311	167.5	166.9
1/3/2023	20	60	11.0		192		6		13		54		2			13		311		167.8	
1/3/2023	21	60	11.3		194		9		20		53		1			14		311		167.2	
1/3/2023	22	60	11.1		186		5		15		68		2			14		311		162.4	
1/3/2023	23	60	11.2		189		9		25		65		2	2		13	13	310	311	164.4	165.4

Average:
Geometric Mean Average:

Limit:

196	6
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

56
≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 03-Jan-2023

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	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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 03-Jan-2023

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	BC	5	BC	1	1	1	1	1	1	1
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
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