



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



Date 2/7/22

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.
2/7/2022	0	60	10.4		199		9		10		14		6			14		299		164.0	
2/7/2022	1	60	10.3		198		11		9		0		6			14		300		164.9	
2/7/2022	2	60	10.3		197		12		17		32		6			14		300		164.5	
2/7/2022	3	60	10.2		200		7		9		24		6	6		14		299	299	164.9	164.6
2/7/2022	4	60	10.3		200		17		26		38		8			15		302		163.7	
2/7/2022	5	60	10.2		197		14		16		10		7			14		305		163.9	
2/7/2022	6	60	10.0		197		7		2		0		7			14		305		165.4	
2/7/2022	7	60	10.1		194		5		1		0		9	8		14	14	304	304	162.9	164.0
2/7/2022	8	60	10.3		197		12		5		0		7			13		305		163.8	
2/7/2022	9	60	10.1		199		12		6		0		7			13		304		164.8	
2/7/2022	10	60	9.8		197		7		7		5		9			14		304		164.5	
2/7/2022	11	60	10.1		198		22		32		34		9	8		14		304	304	164.9	164.5
2/7/2022	12	60	10.3		199		11		16		32		10			14		304		161.1	
2/7/2022	13	60	10.0		197		7		8		9		9			14		305		161.2	
2/7/2022	14	60	10.0		198		5		6		7		8			14		304		165.7	
2/7/2022	15	60	10.6		193		14		20		30		7	9		14	14	304	304	160.0	162.0
2/7/2022	16	60	10.2		199		5		2		0		7			14		305		165.0	
2/7/2022	17	60	10.1		196		15		22		34		9			14		304		161.7	
2/7/2022	18	60	10.0		195		8		4		0		7			14		304		164.2	
2/7/2022	19	60	9.7		194		7		2		0		7	7		14		304	304	162.5	163.4
2/7/2022	20	60	9.8		194		15		12		0		7			14		305		162.4	
2/7/2022	21	60	9.7		192		10		9		0		8			14		305		164.0	
2/7/2022	22	60	9.9		195		8		0		0		7			14		304		162.3	
2/7/2022	23	60	9.9		197		17		1		0		7	7		14	14	304	304	164.3	163.2

Average:
Geometric Mean Average:

Limit:

197	10
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

0
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≤ 12 8-HR. Block Average

lb/hr

see above
≤ 345 °F 4-HR Block Average

°F

see above
≤ 173 4-HR Block Average

klb/hr

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 2/7/22

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.
2/7/2022	0	60	10.1		197		12		35		65		2			14		310		164.3	
2/7/2022	1	60	10.0		196		17		40		58		2			14		310		166.2	
2/7/2022	2	60	9.9		198		17		37		55		2			14		310		165.9	
2/7/2022	3	60	9.9		198		8		24		66		3	2		14		310	310	163.2	164.9
2/7/2022	4	60	10.0		197		15		37		59		3			14		309		165.3	
2/7/2022	5	60	9.9		198		13		24		47		2			14		310		165.7	
2/7/2022	6	60	9.8		197		3		7		60		2			14		310		165.7	
2/7/2022	7	60	9.8		196		6		11		45		2	2		14	14	310	310	165.1	165.5
2/7/2022	8	60	10.0		197		9		11		19		3			14		310		164.9	
2/7/2022	9	60	9.9		196		11		18		40		2			14		310		165.6	
2/7/2022	10	60	9.9		197		11		12		11		4			14		310		161.8	
2/7/2022	11	60	9.9		196		13		17		22		3	3		14		310	310	165.4	164.4
2/7/2022	12	60	9.7		199		17		37		55		3			14		310		165.1	
2/7/2022	13	60	9.8		197		9		19		51		2			14		310		165.8	
2/7/2022	14	60	9.7		197		13		31		60		3			14		310		165.7	
2/7/2022	15	60	9.9		196		8		26		70		3	3		14	14	310	310	165.0	165.4
2/7/2022	16	60	9.9		199		7		25		73		2			14		310		164.9	
2/7/2022	17	60	9.7		194		14		46		70		3			14		310		165.4	
2/7/2022	18	60	9.6		196		2		15		88		2			14		310		164.7	
2/7/2022	19	60	9.7		198		2		15		87		2	2		14		310	310	162.6	164.4
2/7/2022	20	60	9.6		198		8		32		76		2			14		310		165.4	
2/7/2022	21	60	9.5		198		9		29		71		2			14		310		164.9	
2/7/2022	22	60	9.7		196		11		34		68		2			14		310		166.2	
2/7/2022	23	60	9.6		198		12		35		65		2	2		14	14	310	310	164.6	165.3

Average:
Geometric Mean Average:

Limit:

197	9
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

62
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 07-Feb-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	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	2	2	1	2	1	1	1	1
3	2	2	1	1	1	1	1	1	1	1	1
4	1	1	1	2	2	2	2	2	2	2	1
5	2	2	2	1	1	1	1	1	1	1	1
6	2	IC	6	IC	1	1	1	1	2	1	2
7	2	1	2	1	1	1	1	1	1	1	1
8	2	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	2	2	2	2	2	2	2	2	1
12	2	2	2	1	1	2	2	1	2	2	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

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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 07-Feb-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

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 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown