



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



Date 6/11/22

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.
6/11/2022	0	60	9.8		183		15		82		82		4			13		304		164.1	
6/11/2022	1	60	10.2		183		21		92		77		4			13		304		161.0	
6/11/2022	2	60	10.0		195		25		105		77		3			13		304		167.2	
6/11/2022	3	60	10.0		197		17		84		80		3	4		14		305	304	165.4	164.4
6/11/2022	4	60	10.1		193		10		73		86		4			14		304		164.5	
6/11/2022	5	60	9.9		194		15		76		80		4			13		304		166.0	
6/11/2022	6	60	9.9		197		13		71		82		5			14		305		165.7	
6/11/2022	7	60	9.9		188		8		70		89		5	4		14	13	304	304	165.5	165.5
6/11/2022	8	60	10.2		185		12		81		85		5			14		304		163.0	
6/11/2022	9	60	10.1		200		23		103		78		3			13		305		166.6	
6/11/2022	10	60	10.0		196		23		97		77		3			13		305		166.5	
6/11/2022	11	60	10.1		198		20		85		77		3	4		13		304	304	167.3	165.8
6/11/2022	12	60	10.1		196		13		61		79		3			13		305		165.2	
6/11/2022	13	60	10.1		192		17		60		72		4			13		305		165.4	
6/11/2022	14	60	10.1		196		16		73		78		3			14		304		166.7	
6/11/2022	15	60	9.8		190		9		67		87		3	3		13	13	304	304	164.6	165.5
6/11/2022	16	60	9.5		176		13		77		83		3			14		304		160.3	
6/11/2022	17	60	9.8		189		15		74		79		2			13		304		163.3	
6/11/2022	18	60	9.6		198		15		68		77		2			14		305		165.1	
6/11/2022	19	60	9.8		199		20		83		76		2	2		13		304	304	167.1	163.9
6/11/2022	20	60	9.8		191		22		98		77		3			14		304		163.6	
6/11/2022	21	60	9.7		197		21		95		78		2			14		305		166.6	
6/11/2022	22	60	9.6		196		19		68		72		2			14		304		164.5	
6/11/2022	23	60	9.4		189		17		76		78		3	2		14	14	304	304	165.7	165.1

Average:
Geometric Mean Average:

Limit:

192	16
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

80
≥ 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

- 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 6/11/22

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.
6/11/2022	0	60	10.5		199		21		65		67		2			14		312		164.5	
6/11/2022	1	60	10.5		194		22		64		65		2			14		310		165.5	
6/11/2022	2	60	10.5		197		26		73		65		2			14		315		165.7	
6/11/2022	3	60	10.5		196		17		43		61		2	2		14		313	312	165.6	165.3
6/11/2022	4	60	10.3		194		9		49		82		3			15		310		165.5	
6/11/2022	5	60	10.2		199		12		59		80		2			14		306		167.1	
6/11/2022	6	60	9.9		197		5		53		90		2			14		302		165.1	
6/11/2022	7	60	10.0		199		22		82		73		2	2		14	14	311	307	165.5	165.8
6/11/2022	8	60	10.1		195		22		65		66		2			15		314		166.2	
6/11/2022	9	60	10.1		198		23		91		74		2			14		312		166.1	
6/11/2022	10	60	10.0		196		18		66		72		2			14		310		165.5	
6/11/2022	11	60	10.1		197		21		70		70		1	2		15		311	312	166.2	166.0
6/11/2022	12	60	10.2		195		16		66		76		1			14		307		166.8	
6/11/2022	13	60	10.3		198		9		60		85		1			15		300		165.8	
6/11/2022	14	60	10.2		187		20		72		73		49			15		310		168.4	
6/11/2022	15	60	10.2		187		9		65		86		1	13		14	15	302	305	164.5	166.4
6/11/2022	16	60	10.1		198		19		72		74		1			14		303		165.4	
6/11/2022	17	60	10.1		196		19		58		67		1			14		309		166.1	
6/11/2022	18	60	10.2		197		21		66		68		1			14		314		167.1	
6/11/2022	19	60	10.2		195		14		55		75		1	1		14		308	309	165.0	165.9
6/11/2022	20	60	10.3		196		13		62		78		1			15		304		166.0	
6/11/2022	21	60	10.3		195		15		69		78		2			14		299		166.0	
6/11/2022	22	60	10.4		199		18		65		72		2			15		301		166.0	
6/11/2022	23	60	10.3		197		18		53		67		2	2		15	14	306	302	166.2	166.1

Average:
Geometric Mean Average:

Limit:

196	16
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

75
≥ 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 11-Jun-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	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 11-Jun-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	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	IBC	5	IBC	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

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