



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



Date 3/17/22

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.
3/17/2022	0	60	10.0		178		23		78		71		4			13		304		165.6	
3/17/2022	1	60	10.0		177		23		61		63		4			14		304		166.4	
3/17/2022	2	60	10.0		173		28		108		74		4			14		304		164.6	
3/17/2022	3	60	10.0		174		30		103		71		4	4		14		304	304	166.0	165.7
3/17/2022	4	60	10.0		175		26		83		69		5			14		304		165.2	
3/17/2022	5	60	9.9		172		23		70		68		4			14		304		165.5	
3/17/2022	6	60	10.0		182		38		90		58		6			15		305		162.1	
3/17/2022	7	60	10.1		167		80		170		53		6	5		14	14	304	304	164.8	164.4
3/17/2022	8	60	10.1		146		26		54		51		5			14		304		165.4	
3/17/2022	9	60	10.3		170		25		54		54		4			13		304		163.8	
3/17/2022	10	60	10.0		172		19		56		67		5			14		305		167.6	
3/17/2022	11	60	10.1		173		15		52		72		4	4		14		304	304	169.0	166.4
3/17/2022	12	60	9.9		163		5		40		88		5			14		304		162.2	
3/17/2022	13	60	10.1		171		13		53		75		5			14		305		164.0	
3/17/2022	14	60	10.0		173		9		53		83		5			13		304		165.7	
3/17/2022	15	60	10.0		175		8		45		81		5	5		14	14	304	304	165.9	164.4
3/17/2022	16	60	10.3		166		9		44		79		5			14		304		165.2	
3/17/2022	17	60	10.0		168		16		74		78		6			15		304		167.5	
3/17/2022	18	60	9.9		162		17		51		66		6			14		304		168.3	
3/17/2022	19	60	10.0		168		24		59		60		5	5		15		304	304	168.2	167.3
3/17/2022	20	60	9.9		162		19		55		66		4			16		304		167.2	
3/17/2022	21	60	10.0		163		19		51		62		5			13		305		165.3	
3/17/2022	22	60	9.9		170		20		56		64		5			13		304		167.4	
3/17/2022	23	60	9.8		166		16		65		75		5	5		13	14	304	304	167.3	166.8

Average: Geometric Mean Average:

Limit:

169	19
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

70
≥ 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



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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.
3/17/2022	0	60	16.1		171		22		0		0		10			14		251		58.4	
3/17/2022	1	60	15.8		173		25		0		0		17			14		250		63.0	
3/17/2022	2	60	14.1		184		27		10		0		28			14		283		113.4	
3/17/2022	3	60	11.5		198		58		61		4		9	16		15		302	272	165.1	100.0
3/17/2022	4	60	11.3		182		102		96		0		5			14		305		165.7	
3/17/2022	5	60	11.8		196		98		87		0		6			14		300		165.6	
3/17/2022	6	60	11.5		196		96		74		0		6			14		298		160.4	
3/17/2022	7	60	10.4		184		26		47		45		5	6		14	14	276	295	166.7	164.6
3/17/2022	8	60	9.7		187		12		64		81		3			14		300		166.3	
3/17/2022	9	60	9.5		192		4		53		93		4			14		300		165.4	
3/17/2022	10	60	9.7		186		3		47		94		4			14		300		166.5	
3/17/2022	11	60	9.4		178		2		32		94		2	3		14		300	300	166.5	166.2
3/17/2022	12	60	9.0		177		2		37		95		2			14		300		164.2	
3/17/2022	13	60	9.1		185		0		30		99		2			14		300		165.4	
3/17/2022	14	60	9.1		194		0		39		100		3			13		300		166.3	
3/17/2022	15	60	9.6		183		0		35		100		2	2		15	14	300	300	166.8	165.7
3/17/2022	16	60	10.3		166		0		25		100		2			15		300		166.1	
3/17/2022	17	60	9.5		194		0		41		100		3			15		300		165.6	
3/17/2022	18	60	9.5		196		0		28		100		3			15		300		166.9	
3/17/2022	19	60	9.7		190		0		45		99		3	3		14		300	300	166.5	166.3
3/17/2022	20	60	9.7		196		1		50		99		2			14		300		167.3	
3/17/2022	21	60	9.8		187		1		54		98		3			14		300		166.6	
3/17/2022	22	60	10.1		192		5		43		88		2			16		300		166.5	
3/17/2022	23	60	10.4		193		3		66		95		3	2		15	15	300	300	166.0	166.6

Average:
Geometric Mean Average:

Limit:

187
≤ 205 24-HR Block Avg.

3
≤ 29 24-HR Geometric Mean

OR

91
≥ 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 17-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	1	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 17-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