



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



Date 3/21/22

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.
3/21/2022	0	60	9.7		191		23		74		69		5			14		304		168.0	
3/21/2022	1	60	10.0		191		21		60		64		4			13		304		167.3	
3/21/2022	2	60	10.0		194		20		61		67		4			14		305		164.5	
3/21/2022	3	60	10.0		194		17		52		66		3	4		14		304	304	166.1	166.5
3/21/2022	4	60	9.9		187		15		48		69		3			14		304		165.8	
3/21/2022	5	60	9.9		195		22		68		68		4			14		304		165.1	
3/21/2022	6	60	10.0		188		18		59		69		4			13		304		164.7	
3/21/2022	7	60	10.0		181		25		76		66		3	4		13	14	304	304	165.5	165.3
3/21/2022	8	60	10.1		190		24		77		68		4			14		304		164.3	
3/21/2022	9	60	10.0		193		15		49		69		4			14		305		164.1	
3/21/2022	10	60	10.1		196		21		57		64		5			15		304		167.7	
3/21/2022	11	60	10.3		195		21		64		67		4	4		12		304	304	164.3	165.1
3/21/2022	12	60	10.0		192		17		55		68		5			15		305		165.9	
3/21/2022	13	60	10.0		191		18		45		61		6			14		304		165.6	
3/21/2022	14	60	10.0		195		20		56		64		5			14		304		164.6	
3/21/2022	15	60	10.1		193		21		46		54		4	5		13	14	304	304	165.3	165.4
3/21/2022	16	60	10.2		184		27		79		65		5			14		304		165.3	
3/21/2022	17	60	10.3		196		44		151		71		4			14		304		164.4	
3/21/2022	18	60	10.0		198		36		126		71		4			14		305		167.2	
3/21/2022	19	60	10.0		195		46		143		68		5	4		13		304	304	165.1	165.5
3/21/2022	20	60	9.9		194		20		73		72		4			13		305		164.3	
3/21/2022	21	60	10.0		195		23		69		66		4			13		304		165.6	
3/21/2022	22	60	9.8		192		29		81		64		4			14		304		165.7	
3/21/2022	23	60	10.0		191		23		81		72		4	4		13	14	305	304	164.8	165.1

Average:
Geometric Mean Average:

Limit:

192	23
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

67
≥ 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 3/21/22

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.
3/21/2022	0	60	9.4		193		25		83		69		1			14		307		164.8	
3/21/2022	1	60	9.3		193		19		56		65		1			14		310		164.0	
3/21/2022	2	60	9.1		197		21		53		61		1			14		313		165.5	
3/21/2022	3	60	8.9		190		16		50		68		1	1		14		307	309	167.4	165.4
3/21/2022	4	60	9.1		197		9		35		76		2			13		305		165.1	
3/21/2022	5	60	9.3		192		20		52		62		2			12		300		165.7	
3/21/2022	6	60	9.4		196		18		38		54		2			13		304		164.4	
3/21/2022	7	60	9.4		195		8		26		69		3	2		14	13	304	303	164.6	165.0
3/21/2022	8	60	9.4		196		16		28		42		2			13		303		165.7	
3/21/2022	9	60	9.4		195		7		23		72		2			13		306		164.8	
3/21/2022	10	60	9.3		194		11		39		70		3			13		307		165.9	
3/21/2022	11	60	9.3		197		15		39		60		3	3		14		306	305	165.4	165.5
3/21/2022	12	60	9.7		181		13		79		84		3			14		296		166.6	
3/21/2022	13	60	9.1		192		0		37		100		3			13		293		165.6	
3/21/2022	14	60	9.4		182		0		51		100		2			13		295		165.2	
3/21/2022	15	60	9.4		179		1		21		97		2	2		13	13	307	298	166.8	166.0
3/21/2022	16	60	9.2		193		4		29		85		2			13		305		164.9	
3/21/2022	17	60	9.4		194		19		62		70		2			12		305		165.2	
3/21/2022	18	60	9.5		181		25		131		81		3			12		304		167.2	
3/21/2022	19	60	9.4		193		9		65		86		3	2		12		306	305	165.2	165.6
3/21/2022	20	60	9.4		187		36		118		69		2			15		304		165.8	
3/21/2022	21	60	9.4		189		21		66		68		2			14		305		165.0	
3/21/2022	22	60	9.2		192		18		49		63		2			14		305		165.8	
3/21/2022	23	60	9.4		189		20		55		63		2	2		15	13	305	305	164.8	165.4

Average:
Geometric Mean Average:

Limit:

191	8
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

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83
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see above
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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 21-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 21-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