



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



Date 5/30/22

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.
5/30/2022	0	60	10.4		191		23		82		72		3			13		305		166.8	
5/30/2022	1	60	10.4		191		27		85		68		3			13		304		172.6	
5/30/2022	2	60	10.5		194		25		75		67		3			13		304		166.8	
5/30/2022	3	60	10.0		180		30		85		64		3	3		14		304	304	174.7	170.2
5/30/2022	4	60	10.6		186		27		85		68		3			13		304		166.3	
5/30/2022	5	60	10.5		193		26		80		67		3			13		304		163.7	
5/30/2022	6	60	10.4		191		18		72		75		4			13		304		163.2	
5/30/2022	7	60	10.4		186		17		73		76		3	3		13	13	305	304	163.6	164.2
5/30/2022	8	60	10.4		190		30		95		68		4			13		304		164.1	
5/30/2022	9	60	10.6		190		18		71		75		5			13		304		161.3	
5/30/2022	10	60	10.5		189		15		66		77		4			14		304		163.1	
5/30/2022	11	60	10.7		185		10		61		83		4	4		13		304	304	161.9	162.6
5/30/2022	12	60	10.7		194		9		59		84		4			13		304		161.1	
5/30/2022	13	60	10.7		197		8		55		85		4			14		305		164.7	
5/30/2022	14	60	10.7		197		7		52		86		4			13		304		161.6	
5/30/2022	15	60	10.7		198		13		58		78		3	3		13	13	304	304	162.0	162.3
5/30/2022	16	60	10.7		196		17		56		69		3			14		304		163.9	
5/30/2022	17	60	10.7		190		15		52		71		4			13		304		162.6	
5/30/2022	18	60	10.5		192		14		57		75		3			13		304		164.6	
5/30/2022	19	60	10.5		190		32		75		57		3	3		13		304	304	165.8	164.2
5/30/2022	20	60	10.6		188		35		66		48		3			13		304		163.7	
5/30/2022	21	60	10.5		186		20		63		68		4			13		304		165.1	
5/30/2022	22	60	10.5		186		17		53		67		4			13		304		164.7	
5/30/2022	23	60	10.4		180		20		56		64		4	4		13	13	304	304	164.1	164.4

Average: Geometric Mean Average:	190	18	OR	73	see above	see above	see above	see above
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 ppmc 4-HR Block Average	≤ 12 lb/hr 8-HR. Block Average	≤ 345 °F 4-HR Block Average	≤ 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 5/30/22

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.
5/30/2022	0	60	10.5		189		12		71		82		2			14		310		167.3	
5/30/2022	1	60	10.2		183		9		67		86		2			14		310		171.3	
5/30/2022	2	60	10.3		176		11		66		84		3			14		310		170.3	
5/30/2022	3	60	10.5		175		9		62		86		22	7		14		310	310	165.7	168.6
5/30/2022	4	60	10.9		191		6		52		88		2			14		310		162.7	
5/30/2022	5	60	9.7		179		10		79		87		2			13		311		173.4	
5/30/2022	6	60	10.7		190		18		73		75		3			13		309		179.0	
5/30/2022	7	60	11.1		194		3		46		93		3	3		13	14	310	310	153.0	167.0
5/30/2022	8	60	10.2		193		4		56		93		1			14		310		169.9	
5/30/2022	9	60	10.6		192		2		42		96		1			13		310		161.9	
5/30/2022	10	60	11.0		197		1		31		97		2			13		310		151.6	
5/30/2022	11	60	10.5		194		1		28		98		1	1		14		310	310	159.0	160.6
5/30/2022	12	60	10.7		198		0		29		98		1			14		310		155.5	
5/30/2022	13	60	10.1		193		0		30		99		1			14		310		162.2	
5/30/2022	14	60	10.5		192		1		33		98		1			14		286		159.9	
5/30/2022	15	60	10.1		198		0		45		99		1	1		14	14	293	300	161.8	159.9
5/30/2022	16	60	10.0		197		1		43		99		1			14		321		170.2	
5/30/2022	17	60	10.0		189		1		40		98		1			14		311		166.0	
5/30/2022	18	60	9.9		194		1		51		99		1			14		311		164.3	
5/30/2022	19	60	10.1		191		1		65		99		1	1		13		309	313	163.9	166.1
5/30/2022	20	60	10.0		189		1		58		99		1			13		314		166.4	
5/30/2022	21	60	9.9		192		0		41		99		1			14		309		165.4	
5/30/2022	22	60	9.9		193		0		44		99		1			14		310		165.5	
5/30/2022	23	60	10.1		190		0		46		99		0	1		14	14	310	311	165.5	165.7

Average:
Geometric Mean Average:

Limit:

190	2
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

97
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 30-May-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 30-May-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

Status Flags

I - Invalid C - Calibration F - Offline T - Out of Control ^ - Startup
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown