



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



Date 6/29/22

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.
6/29/2022	0	60	10.3		185		9		71		87		4			15		309		164.3	
6/29/2022	1	60	10.3		197		24		108		78		3			15		309		166.3	
6/29/2022	2	60	10.2		196		26		113		77		3			15		309		167.8	
6/29/2022	3	60	10.1		198		17		89		81		3	3		15		310	309	166.6	166.3
6/29/2022	4	60	10.2		197		18		92		81		2			15		309		168.7	
6/29/2022	5	60	10.2		194		18		89		80		3			14		310		167.6	
6/29/2022	6	60	10.0		194		12		71		83		3			15		309		166.4	
6/29/2022	7	60	10.3		183		16		75		78		2	3		14	15	308	309	165.8	167.1
6/29/2022	8	60	10.7		189		11		69		83		2			14		309		170.1	
6/29/2022	9	60	10.7		191		23		97		77		4			13		306		162.2	
6/29/2022	10	60	10.6		194		25		93		73		3			13		309		166.9	
6/29/2022	11	60	10.5		194		19		73		74		3	3		14		310	308	165.9	166.3
6/29/2022	12	60	10.5		194		21		71		70		4			15		309		166.8	
6/29/2022	13	60	10.5		195		14		56		74		3			15		309		164.6	
6/29/2022	14	60	10.2		195		9		47		81		3			15		310		165.0	
6/29/2022	15	60	10.2		195		13		49		73		3	3		15	14	309	309	165.0	165.3
6/29/2022	16	60	10.2		191		17		66		74		4			15		309		166.2	
6/29/2022	17	60	10.5		185		18		62		72		4			15		309		165.5	
6/29/2022	18	60	10.7		196		22		75		71		4			16		309		160.5	
6/29/2022	19	60	10.3		192		15		58		75		4	4		15		310	309	162.5	163.7
6/29/2022	20	60	10.4		193		9		47		81		3			15		309		162.7	
6/29/2022	21	60	10.2		190		13		57		78		3			15		309		164.1	
6/29/2022	22	60	10.2		189		14		53		73		3			15		310		166.1	
6/29/2022	23	60	10.2		180		15		60		75		3	3		15	15	309	309	163.1	164.0

Average:
Geometric Mean Average:

Limit:

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

OR

77
≥ 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 6/29/22

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.
6/29/2022	0	60	10.3		193		4		46		92		2			18		305		165.0	
6/29/2022	1	60	10.3		188		16		66		75		2			19		307		168.2	
6/29/2022	2	60	10.3		189		8		50		83		2			17		310		166.7	
6/29/2022	3	60	10.2		187		7		46		84		2	2		16		313	309	168.4	167.1
6/29/2022	4	60	10.1		186		13		66		80		2			16		306		168.2	
6/29/2022	5	60	10.1		188		9		53		84		2			16		303		168.2	
6/29/2022	6	60	10.1		188		5		38		88		2			14		306		166.0	
6/29/2022	7	60	10.4		183		13		54		77		1	2		14	16	305	305	166.8	167.3
6/29/2022	8	60	10.3		183		3		34		92		2			14		304		166.7	
6/29/2022	9	60	10.1		190		16		48		67		4			14		314		167.0	
6/29/2022	10	60	10.3		179		14		46		70		2			14		309		169.9	
6/29/2022	11	60	10.4		194		8		34		77		2	2		14		302	307	167.4	167.7
6/29/2022	12	60	10.0		188		12		39		70		3			14		315		173.8	
6/29/2022	13	60	10.5		194		0		19		99		1			15		302		166.8	
6/29/2022	14	60	10.1		196		0		19		98		2			13		307		167.0	
6/29/2022	15	60	10.1		192		6		23		75		2	2		13	14	319	311	165.9	168.4
6/29/2022	16	60	10.1		194		7		25		73		3			13		322		166.7	
6/29/2022	17	60	9.9		191		7		21		69		2			13		326		168.3	
6/29/2022	18	60	10.1		187		16		33		51		2			11		331		170.5	
6/29/2022	19	60	10.2		188		6		18		78		3	2		11		323	325	165.1	167.7
6/29/2022	20	60	10.2		193		4		17		77		1			13		320		166.7	
6/29/2022	21	60	10.1		194		7		18		60		2			14		325		166.5	
6/29/2022	22	60	10.2		193		15		24		39		2			13		325		168.0	
6/29/2022	23	60	10.4		193		10		27		62		2	2		15	13	317	322	165.4	166.7

Average:
Geometric Mean Average:

Limit:

190	6
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

81
≥ 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 29-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 29-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

Status Flags

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