



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



Date 11/19/22

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.
11/19/2022	0	60	9.4		198		2		29		95		5			13		310		166.4	
11/19/2022	1	60	9.0		179		2		37		95		5			13		307		165.4	
11/19/2022	2	60	9.0		185		5		45		89		4			14		311		165.1	
11/19/2022	3	60	9.0		185		14		61		77		4	4		13		309	309	165.5	165.6
11/19/2022	4	60	9.1		195		9		54		82		5			14		310		166.4	
11/19/2022	5	60	9.2		195		18		74		76		4			14		309		166.1	
11/19/2022	6	60	8.9		184		4		45		92		5			13		310		163.9	
11/19/2022	7	60	9.0		200		8		49		84		4	4		14	14	309	310	165.2	165.4
11/19/2022	8	60	8.9		185		7		46		84		4			13		310		163.8	
11/19/2022	9	60	9.1		192		7		53		88		5			13		309		166.3	
11/19/2022	10	60	9.1		217		12		60		79		4			13		309		164.8	
11/19/2022	11	60	9.1		203		10		50		80		4	4		13		311	310	166.1	165.3
11/19/2022	12	60	9.3		213		6		38		85		4			13		310		166.4	
11/19/2022	13	60	9.4		209		6		40		84		4			13		309		166.7	
11/19/2022	14	60	9.3		186		13		51		74		4			13		310		168.0	
11/19/2022	15	60	9.5		200		11		54		79		3	4		13	13	309	309	166.7	166.9
11/19/2022	16	60	9.5		196		21		84		75		4			13		310		164.6	
11/19/2022	17	60	9.5		202		16		73		78		5			14		310		166.8	
11/19/2022	18	60	9.7		194		24		95		75		5			13		310		166.1	
11/19/2022	19	60	9.7		194		22		77		72		5	4		14		309	310	167.4	166.2
11/19/2022	20	60	9.7		193		14		57		76		5			14		310		166.0	
11/19/2022	21	60	9.7		200		14		53		74		5			18		309		165.4	
11/19/2022	22	60	9.7		199		19		59		68		5			15		309		165.8	
11/19/2022	23	60	9.7		197		8		41		81		5	5		14	14	310	310	165.5	165.7

Average: Geometric Mean Average:	196	9	OR	83	see above	see above	see above	see above			
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 4-HR Block Average	ppmc	≥ 12 8-HR. Block Average	lb/hr	≤ 345 °F 4-HR Block Average	≤ 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 11/19/22

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.
11/19/2022	0	60	9.9		192		7		33		78		3			13		310		166.8	
11/19/2022	1	60	10.0		192		8		30		73		3			14		310		166.8	
11/19/2022	2	60	10.1		189		12		41		71		3			14		310		166.5	
11/19/2022	3	60	10.1		193		18		49		64		3	3		14		310	310	167.0	166.8
11/19/2022	4	60	10.1		193		11		45		74		4			13		310		165.6	
11/19/2022	5	60	10.3		182		14		46		69		3			14		310		162.6	
11/19/2022	6	60	10.2		192		6		27		76		3			14		310		161.2	
11/19/2022	7	60	10.1		193		10		38		74		3	3		14	13	310	310	166.4	164.0
11/19/2022	8	60	10.1		192		16		48		66		2			14		310		166.3	
11/19/2022	9	60	10.2		194		16		55		71		2			14		310		166.8	
11/19/2022	10	60	10.3		189		19		76		75		3			14		310		165.8	
11/19/2022	11	60	10.2		186		14		48		71		2	2		13		310	310	166.8	166.4
11/19/2022	12	60	10.2		193		10		37		72		3			13		310		166.1	
11/19/2022	13	60	10.2		184		8		28		72		3			14		310		166.4	
11/19/2022	14	60	10.1		192		19		41		54		3			13		310		167.0	
11/19/2022	15	60	9.9		185		13		41		69		3	3		14	14	310	310	167.1	166.6
11/19/2022	16	60	10.3		185		20		53		62		8			14		310		165.8	
11/19/2022	17	60	10.0		191		15		49		69		3			14		310		166.7	
11/19/2022	18	60	10.1		196		18		53		65		3			14		310		166.7	
11/19/2022	19	60	10.0		191		18		54		67		2	4		14		310	310	166.2	166.3
11/19/2022	20	60	10.0		196		13		43		70		2			14		310		167.2	
11/19/2022	21	60	10.1		193		17		41		59		3			15		310		165.9	
11/19/2022	22	60	10.1		193		18		47		62		2			15		310		167.0	
11/19/2022	23	60	10.1		193		16		46		66		2	2		14	14	310	310	166.3	166.6

Average:
Geometric Mean Average:

Limit:

191	13
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

69
≥ 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 OPACITY REPORT



Date 19-Nov-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	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	0	IC	0	IC	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0

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 19-Nov-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	1	2	2	1	2	1	1	2	1	1	1
3	2	2	2	1	2	2	2	1	2	2	2
4	2	1	1	2	1	1	2	2	2	1	1
5	2	2	2	2	1	2	2	1	2	2	2
6	2	IBC	6	IBC	2	1	1	1	2	1	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	1	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