



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



Date 10/14/22

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.
10/14/2022	0	60	10.1		180		10		35		73		5			14		309		164.7	
10/14/2022	1	60	10.1		182		22		53		58		5			13		309		165.9	
10/14/2022	2	60	10.0		179		14		42		67		5			14		309		165.5	
10/14/2022	3	60	10.0		176		7		28		75		6	5		14		309	309	165.1	165.3
10/14/2022	4	60	9.9		170		1		22		94		6			14		310		165.1	
10/14/2022	5	60	9.9		182		1		15		95		6			14		310		163.9	
10/14/2022	6	60	9.7		180		0		16		97		7			14		310		164.1	
10/14/2022	7	60	9.7		170		1		21		93		6	6		14	14	309	309	163.9	164.3
10/14/2022	8	60	9.8		172		6		22		73		8			14		310		166.4	
10/14/2022	9	60	10.2		175		12		23		49		6			14		309		165.6	
10/14/2022	10	60	9.9		166		3		23		88		7			14		310		163.9	
10/14/2022	11	60	9.5		169		2		28		92		9	7		13		309	310	158.1	163.5
10/14/2022	12	60	9.7		168		2		23		92		8			14		309		158.5	
10/14/2022	13	60	9.8		190		4		32		87		7			14		309		162.0	
10/14/2022	14	60	9.9		182		4		23		82		7			14		309		163.9	
10/14/2022	15	60	9.7		190		3		17		85		7	7		14	14	310	309	163.7	162.0
10/14/2022	16	60	9.9		181		13		33		60		7			14		309		166.8	
10/14/2022	17	60	9.8		187		10		28		63		7			13		310		164.6	
10/14/2022	18	60	9.7		179		15		34		55		7			14		309		163.9	
10/14/2022	19	60	9.7		183		11		23		51		6	7		14		309	309	165.6	165.2
10/14/2022	20	60	9.6		177		12		32		63		6			14		309		164.3	
10/14/2022	21	60	9.8		177		6		26		78		6			14		309		164.8	
10/14/2022	22	60	9.8		186		6		27		76		6			13		310		165.1	
10/14/2022	23	60	9.8		185		6		25		77		6	6		14	14	309	309	165.7	165.0

Average: Geometric Mean Average:	179	5	OR	81	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 10/14/22

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.
10/14/2022	0	60	11.5		192		9		36		75		3			14		310		165.5	
10/14/2022	1	60	11.3		196		11		42		74		3			14		310		165.3	
10/14/2022	2	60	11.3		197		13		46		71		2			14		310		165.8	
10/14/2022	3	60	11.3		195		8		35		76		3	3		14		310	310	165.4	165.5
10/14/2022	4	60	11.2		194		9		34		75		5			14		310		165.8	
10/14/2022	5	60	11.1		196		14		46		69		4			14		310		165.2	
10/14/2022	6	60	11.1		195		6		27		76		4			14		310		164.3	
10/14/2022	7	60	11.3		191		6		22		73		5	4		14	14	310	310	160.1	163.8
10/14/2022	8	60	11.2		188		9		31		71		7			14		310		160.1	
10/14/2022	9	60	11.7		191		10		29		67		6			14		309		157.7	
10/14/2022	10	60	11.4		194		10		31		67		5			14		310		166.3	
10/14/2022	11	60	11.2		198		7		25		74		5	6		14		310	310	167.0	162.8
10/14/2022	12	60	11.5		198		8		29		71		5			14		310		162.0	
10/14/2022	13	60	11.5		193		14		51		73		5			14		310		165.4	
10/14/2022	14	60	11.4		197		17		51		67		6			14		310		163.7	
10/14/2022	15	60	11.1		197		19		52		62		5	5		14	14	310	310	166.2	164.3
10/14/2022	16	60	11.1		197		17		41		59		4			14		310		166.6	
10/14/2022	17	60	11.2		200		21		54		61		5			15		310		165.8	
10/14/2022	18	60	11.2		197		22		51		58		5			14		310		165.0	
10/14/2022	19	60	11.3		196		20		50		61		5	5		14		310	310	164.8	165.6
10/14/2022	20	60	11.4		199		23		56		58		5			14		310		165.9	
10/14/2022	21	60	11.4		196		17		50		65		5			14		310		165.4	
10/14/2022	22	60	11.3		198		18		44		60		4			14		310		165.6	
10/14/2022	23	60	11.3		198		17		43		61		4	4		14	14	310	310	166.0	165.7

Average:
Geometric Mean Average:

Limit:

196	12
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

68
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 14-Oct-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	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	3	IC	5	IC	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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 14-Oct-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