



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



Date 12/11/22

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.
12/11/2022	0	60	11.4		198		37		62		40		8			14		309		166.4	
12/11/2022	1	60	11.6		199		32		72		55		7			14		309		165.6	
12/11/2022	2	60	11.5		200		30		71		58		6			14		310		166.8	
12/11/2022	3	60	11.5		198		5		55		91		8	7		14		309	309	165.1	166.0
12/11/2022	4	60	11.4		200		22		67		67		6			14		309		167.6	
12/11/2022	5	60	11.7		199		32		61		47		6			13		309		164.4	
12/11/2022	6	60	11.6		199		22		58		62		7			14		309		165.3	
12/11/2022	7	60	11.7		199		37		69		46		6	6		14	14	310	309	165.1	165.6
12/11/2022	8	60	11.7		198		23		67		65		6			14		309		165.2	
12/11/2022	9	60	11.6		199		19		58		67		6			14		309		164.5	
12/11/2022	10	60	11.5		198		25		70		64		6			14		309		163.8	
12/11/2022	11	60	11.5		198		14		38		63		6	6		14		309	309	165.1	164.7
12/11/2022	12	60	11.4		200		16		40		61		7			13		309		164.9	
12/11/2022	13	60	11.3		199		19		60		68		7			14		309		164.5	
12/11/2022	14	60	11.3		199		21		77		73		7			14		309		165.3	
12/11/2022	15	60	11.3		199		6		53		88		6	7		14	14	310	309	165.8	165.1
12/11/2022	16	60	11.3		199		3		50		94		6			14		309		164.3	
12/11/2022	17	60	11.2		198		11		57		80		7			13		309		166.3	
12/11/2022	18	60	11.2		199		17		58		71		6			15		309		165.9	
12/11/2022	19	60	11.3		198		16		48		67		6	6		14		309	309	163.8	165.1
12/11/2022	20	60	11.3		198		20		55		65		6			14		309		165.7	
12/11/2022	21	60	11.4		198		21		64		67		5			14		309		165.3	
12/11/2022	22	60	11.5		202		32		97		67		5			14		309		164.9	
12/11/2022	23	60	11.4		199		19		49		61		5	5		14	14	309	309	167.2	165.8

Average:
Geometric Mean Average:

Limit:

199	18
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

70
≥ 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 12/11/22

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.
12/11/2022	0	60	10.5		196		7		26		74		2			14		311		167.6	
12/11/2022	1	60	10.7		193		13		27		54		1			14		311		167.1	
12/11/2022	2	60	10.8		193		18		38		53		1			14		311		165.9	
12/11/2022	3	60	10.8		196		16		34		53		1	I		13		311	311	166.7	166.8
12/11/2022	4	60	10.7		197		15		31		51		2			14		311		166.7	
12/11/2022	5	60	10.8		191		13		35		62		0			14		311		166.3	
12/11/2022	6	60	10.8		191		15		32		54		0			14		311		165.7	
12/11/2022	7	60	10.8		189		19		39		51		1	I		14	14	311	311	166.8	166.3
12/11/2022	8	60	10.8		195		19		39		51		1			13		311		166.5	
12/11/2022	9	60	10.7		195		15		31		53		0			14		311		165.8	
12/11/2022	10	60	10.6		198		17		28		38		1			14		311		167.2	
12/11/2022	11	60	10.6		187		11		22		48		1	I		14		311	311	165.1	166.2
12/11/2022	12	60	10.5		193		5		19		74		1			14		310		166.6	
12/11/2022	13	60	10.4		194		8		29		71		1			14		311		166.3	
12/11/2022	14	60	10.4		195		7		28		74		1			14		311		165.9	
12/11/2022	15	60	10.6		193		6		24		75		1	I		14	14	311	311	167.1	166.5
12/11/2022	16	60	10.5		192		4		22		80		1			14		311		165.4	
12/11/2022	17	60	10.4		192		6		28		79		1			14		311		165.5	
12/11/2022	18	60	10.5		195		6		28		76		1			14		311		164.3	
12/11/2022	19	60	10.5		190		9		37		75		1	I		14		311	311	166.6	165.4
12/11/2022	20	60	10.6		190		9		30		69		1			14		311		165.8	
12/11/2022	21	60	10.6		194		12		29		58		1			14		311		165.7	
12/11/2022	22	60	10.6		194		12		24		52		1			13		311		165.9	
12/11/2022	23	60	10.6		189		12		22		46		1	I		14	14	311	311	166.8	166.0

Average: Geometric Mean Average:	193	11	OR	63	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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 11-Dec-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	2	1	1
1	2	2	2	1	1	2	1	1	1	2	1
2	1	1	1	1	1	2	2	2	2	2	1
3	2	2	2	2	2	2	2	1	1	2	1
4	1	1	1	1	1	1	1	1	1	1	1
5	2	1	1	2	1	1	1	1	1	1	1
6	2	IC	5	IC	1	1	1	1	1	1	2
7	2	2	2	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	2	2	2	2	2	1	1	1	2	1
11	2	1	1	1	1	2	1	1	2	2	1
12	1	1	1	1	1	2	2	2	2	2	1
13	2	2	1	1	1	1	1	2	1	1	1
14	2	2	2	1	1	1	1	1	1	1	1
15	1	1	1	1	1	2	1	1	1	2	1
16	1	1	1	1	1	1	1	1	1	1	1
17	1	1	1	1	1	1	1	2	2	1	1
18	2	1	1	1	1	1	2	2	2	1	1
19	2	2	1	1	1	1	1	1	1	1	1
20	1	2	2	2	2	1	1	1	1	1	1
21	1	2	1	1	1	1	1	1	1	1	1
22	1	1	1	1	1	2	1	1	1	2	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 11-Dec-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	1	1	1	1	1	2
3	1	1	1	1	2	1	2	2	2	1	1
4	1	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