



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



Date 12/1/22

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.
12/1/2022	0	60	10.6		194		7		39		82		5			13		310		165.9	
12/1/2022	1	60	10.7		198		8		39		80		5			13		309		166.3	
12/1/2022	2	60	10.8		198		9		41		77		5			14		309		165.5	
12/1/2022	3	60	10.7		197		11		48		77		5	5		13		309	309	165.0	165.7
12/1/2022	4	60	10.5		197		13		58		77		4			14		310		165.2	
12/1/2022	5	60	10.3		192		12		52		76		5			14		309		166.6	
12/1/2022	6	60	10.4		177		12		44		73		4			13		310		168.2	
12/1/2022	7	60	10.5		187		4		27		86		5	4		14	14	308	309	165.8	166.4
12/1/2022	8	60	11.1		178		12		41		71		9			13		309		156.3	
12/1/2022	9	60	10.5		195		9		47		82		7			13		313		165.4	
12/1/2022	10	60	10.7		183		16		42		62		5			14		306		168.2	
12/1/2022	11	60	10.6		194		15		50		70		6	7		13		310	309	164.3	163.6
12/1/2022	12	60	10.7		183		11		64		82		6			14		312		163.8	
12/1/2022	13	60	10.7		191		8		43		82		5			13		306		167.5	
12/1/2022	14	60	10.4		194		7		42		84		8			13		309		163.1	
12/1/2022	15	60	10.3		183		4		29		87		6	6		13	13	312	310	165.6	165.0
12/1/2022	16	60	10.3		193		4		31		86		7			13		308		167.5	
12/1/2022	17	60	10.6		199		3		18		86		9			13		309		166.7	
12/1/2022	18	60	10.7		197		5		39		88		9			14		311		165.4	
12/1/2022	19	60	10.6		196		10		55		82		8	8		13		309	309	167.2	166.7
12/1/2022	20	60	10.7		196		6		39		85		7			13		307		167.0	
12/1/2022	21	60	10.8		196		9		47		82		7			13		310		167.4	
12/1/2022	22	60	10.9		196		7		40		84		6			13		310		164.8	
12/1/2022	23	60	10.8		200		4		31		87		7	7		13	13	309	309	165.8	166.3

Average: Geometric Mean Average:	192	8	OR	81	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 12/1/22

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.
12/1/2022	0	60	10.9		194		4		27		84		3			14		310		166.4	
12/1/2022	1	60	10.9		197		7		33		78		3			13		310		166.8	
12/1/2022	2	60	10.6		196		8		32		76		2			13		310		166.4	
12/1/2022	3	60	10.7		196		7		32		79		3	3		14		310	310	167.1	166.7
12/1/2022	4	60	10.7		196		8		35		77		5			13		310		167.0	
12/1/2022	5	60	10.7		197		13		33		61		4			14		310		166.5	
12/1/2022	6	60	10.7		196		6		24		73		4			13		310		166.1	
12/1/2022	7	60	10.6		194		4		14		74		4	4		14	14	310	310	166.1	166.4
12/1/2022	8	60	10.8		194		10		34		70		4			14		310		166.5	
12/1/2022	9	60	11.0		165		4		21		79		2			14		310		166.9	
12/1/2022	10	60	10.7		193		5		22		79		4			14		310		166.3	
12/1/2022	11	60	10.3		191		4		21		81		4	4		14		310	310	166.6	166.6
12/1/2022	12	60	10.5		194		7		29		76		4			14		310		167.9	
12/1/2022	13	60	11.2		158		20		38		49		4			13		309		169.0	
12/1/2022	14	60	10.7		193		6		23		73		3			14		310		165.4	
12/1/2022	15	60	10.7		196		4		16		78		4	4		13	14	310	310	162.7	166.3
12/1/2022	16	60	10.7		197		6		27		78		5			14		310		164.3	
12/1/2022	17	60	10.9		198		5		30		83		4			13		310		166.7	
12/1/2022	18	60	10.8		197		9		45		80		4			13		310		166.9	
12/1/2022	19	60	11.0		196		14		53		73		4	4		14		310	310	165.8	165.9
12/1/2022	20	60	10.9		195		6		29		81		4			14		310		166.6	
12/1/2022	21	60	10.8		198		4		24		84		4			13		310		167.1	
12/1/2022	22	60	11.0		193		4		24		83		3			14		310		166.2	
12/1/2022	23	60	10.8		197		4		24		85		4	4		14	14	310	310	166.4	166.6

Average:
Geometric Mean Average:

Limit:

192	6
≤ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 01-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	3	3	3	3	3	3	3	3	3	3	3
1	3	3	3	3	3	3	3	3	3	3	3
2	3	3	3	3	3	3	3	3	2	3	3
3	3	3	3	3	3	3	3	2	2	3	3
4	3	3	3	2	3	3	3	3	2	3	2
5	3	3	3	3	3	3	3	2	2	3	3
6	2	IC	6	IC	2	3	3	3	3	3	3
7	2	3	3	3	3	3	3	3	3	3	2
8	3	3	3	3	2	3	3	3	3	3	3
9	3	3	2	2	3	3	3	3	3	3	3
10	3	3	3	3	3	3	3	3	3	3	3
11	3	2	3	3	3	3	3	3	2	3	3
12	2	2	2	2	2	2	2	2	2	2	2
13	2	2	3	3	3	2	2	2	2	2	2
14	2	2	2	2	2	2	2	3	2	2	2
15	2	2	3	2	3	3	3	3	3	3	3
16	2	3	3	3	3	2	2	2	2	2	2
17	2	2	2	2	2	2	2	3	3	2	2
18	3	3	3	3	3	3	3	3	2	3	3
19	2	2	2	3	2	3	3	3	3	3	2
20	3	3	3	3	3	3	3	3	3	3	3
21	3	3	2	2	2	2	2	2	2	2	2
22	2	2	2	3	2	3	3	2	2	3	2
23	3	3	3	3	3	3	2	2	2	3	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 01-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	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	IBC	6	IBC	2	2	2	2	2	2	2
7	2	2	2	2	2	2	2	1	2	2	2
8	2	2	2	2	2	2	2	2	2	2	2
9	2	2	2	1	1	1	1	1	1	1	1
10	2	1	1	1	1	1	1	1	1	1	1
11	2	1	1	1	1	2	2	2	2	2	1
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	1	2	1	1	2	2	1	2	2	2	1
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	1	2	2	2	2	2	2	2
20	2	2	2	2	2	2	2	2	2	2	2
21	2	2	1	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