



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



Date 11/13/22

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.
11/13/2022	0	60	10.7		182		10		56		82		5			14		309		167.2	
11/13/2022	1	60	10.9		196		17		69		76		4			13		310		167.8	
11/13/2022	2	60	10.9		193		13		59		77		4			13		309		166.6	
11/13/2022	3	60	10.9		195		13		55		77		4	4		13		310	309	167.1	167.2
11/13/2022	4	60	11.0		195		17		67		74		6			15		310		163.6	
11/13/2022	5	60	10.7		192		16		70		78		6			13		309		166.4	
11/13/2022	6	60	10.7		196		11		51		79		6			13		309		165.9	
11/13/2022	7	60	10.4		193		16		59		73		6	6		13	14	310	310	169.1	166.2
11/13/2022	8	60	10.7		192		18		63		72		6			14		309		163.7	
11/13/2022	9	60	10.4		195		13		57		77		5			13		310		167.4	
11/13/2022	10	60	10.7		191		8		49		83		6			14		309		164.0	
11/13/2022	11	60	10.8		179		8		57		86		6	6		13		309	309	164.4	164.9
11/13/2022	12	60	10.5		193		14		69		80		6			13		310		168.1	
11/13/2022	13	60	10.6		196		8		51		84		5			14		310		166.0	
11/13/2022	14	60	10.6		191		7		48		87		5			14		309		166.1	
11/13/2022	15	60	10.8		194		9		52		83		5	5		14	14	309	309	167.1	166.8
11/13/2022	16	60	10.6		192		9		48		82		5			13		309		166.6	
11/13/2022	17	60	10.7		195		5		38		88		5			13		310		165.6	
11/13/2022	18	60	10.8		194		8		46		83		5			13		309		164.1	
11/13/2022	19	60	10.9		191		11		44		75		6	5		13		310	309	166.4	165.7
11/13/2022	20	60	10.8		185		10		48		80		6			13		309		169.1	
11/13/2022	21	60	10.9		187		9		50		82		5			13		309		166.4	
11/13/2022	22	60	11.0		193		16		56		72		5			13		309		164.2	
11/13/2022	23	60	10.9		193		18		58		69		5	5		13	13	310	309	165.8	166.4

Average: Geometric Mean Average:	192	11	OR	80	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 11/13/22

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.
11/13/2022	0	60	10.4		189		12		50		75		1			13		310		166.4	
11/13/2022	1	60	10.4		189		14		51		73		1			14		310		166.4	
11/13/2022	2	60	10.4		187		10		47		78		1			14		310		166.7	
11/13/2022	3	60	10.4		186		14		58		76		1	1		13		310	310	167.2	166.6
11/13/2022	4	60	10.3		187		21		76		73		2			13		310		166.2	
11/13/2022	5	60	10.3		188		14		56		75		2			14		310		166.7	
11/13/2022	6	60	10.3		190		8		38		79		1			14		310		166.8	
11/13/2022	7	60	10.4		190		18		59		70		2	2		14	14	310	310	165.5	166.3
11/13/2022	8	60	10.4		191		18		57		69		1			14		310		166.8	
11/13/2022	9	60	10.2		188		11		43		74		2			14		310		165.7	
11/13/2022	10	60	10.2		193		6		34		82		2			13		310		166.1	
11/13/2022	11	60	10.3		180		7		35		80		1	2		14		310	310	165.4	166.0
11/13/2022	12	60	10.2		186		7		39		81		3			13		310		166.8	
11/13/2022	13	60	10.2		176		6		35		81		2			13		310		165.7	
11/13/2022	14	60	10.4		178		11		46		76		1			13		310		167.5	
11/13/2022	15	60	10.4		191		12		43		73		2	2		13	13	310	310	166.3	166.6
11/13/2022	16	60	10.4		183		8		33		75		2			13		310		165.3	
11/13/2022	17	60	10.5		190		8		33		75		2			13		310		164.7	
11/13/2022	18	60	10.5		174		10		39		75		3			13		310		164.0	
11/13/2022	19	60	10.6		191		14		39		65		2	2		14		310	310	166.1	165.0
11/13/2022	20	60	10.6		192		18		50		64		2			13		310		165.9	
11/13/2022	21	60	10.2		189		9		36		76		1			13		310		166.0	
11/13/2022	22	60	10.3		186		16		47		66		1			14		310		164.2	
11/13/2022	23	60	10.2		194		16		47		66		1	1		14	13	310	310	166.6	165.7

Average:
Geometric Mean Average:

Limit:

187	11
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

75
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 13-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	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	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	1	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 13-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	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	2	2	1	1	1	1	1	1	1	1
3	2	1	1	1	1	1	1	1	1	1	1
4	1	1	1	2	1	1	1	1	1	1	1
5	1	1	1	1	1	1	2	1	1	1	1
6	2	IBC	6	IBC	1	1	1	1	1	1	2
7	1	1	1	1	1	1	1	1	1	1	1
8	2	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	2	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	2	1	1	1	2	1
14	1	2	2	2	1	1	1	1	1	1	1
15	2	2	1	1	1	1	1	1	1	1	1
16	1	1	2	1	1	1	1	1	1	1	1
17	1	1	1	1	2	1	2	2	1	1	1
18	1	1	1	1	1	1	1	1	2	1	1
19	1	1	1	1	1	1	1	1	1	1	1
20	1	1	1	2	2	1	2	1	1	1	1
21	1	1	1	1	1	1	1	1	1	1	1
22	1	2	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