



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



Date 11/28/22

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.
11/28/2022	0	60	10.4		192		8		41		82		5			13		310		166.6	
11/28/2022	1	60	10.4		191		8		39		81		4			13		310		165.2	
11/28/2022	2	60	10.4		190		4		33		86		5			13		309		164.0	
11/28/2022	3	60	10.2		184		4		30		87		5	5		13		310	310	164.3	165.0
11/28/2022	4	60	10.4		190		5		34		86		4			13		309		165.5	
11/28/2022	5	60	10.4		191		4		30		85		4			14		309		166.3	
11/28/2022	6	60	10.1		177		2		25		93		7			13		310		163.5	
11/28/2022	7	60	9.9		172		1		22		94		10	6		13	13	309	309	162.7	164.5
11/28/2022	8	60	9.7		175		4		41		91		8			13		309		169.7	
11/28/2022	9	60	10.3		191		7		42		83		7			14		309		164.5	
11/28/2022	10	60	10.4		189		10		44		78		6			13		310		164.6	
11/28/2022	11	60	10.0		187		3		26		90		5	7		13		307	309	165.3	166.0
11/28/2022	12	60	10.3		193		3		25		89		7			13		312		166.5	
11/28/2022	13	60	10.4		195		2		24		90		6			13		307		163.0	
11/28/2022	14	60	9.9		187		3		27		90		6			13		311		167.8	
11/28/2022	15	60	10.0		182		2		27		94		8	7		13	13	310	310	165.0	165.6
11/28/2022	16	60	10.1		186		1		20		95		6			13		308		163.7	
11/28/2022	17	60	10.2		187		2		28		91		6			13		311		165.6	
11/28/2022	18	60	10.2		190		3		28		90		5			13		309		164.7	
11/28/2022	19	60	10.2		194		5		27		81		4	5		13		309	309	165.6	164.9
11/28/2022	20	60	10.2		184		4		25		85		5			13		309		165.8	
11/28/2022	21	60	10.2		193		6		30		79		5			13		310		166.1	
11/28/2022	22	60	10.4		194		8		28		70		4			13		309		165.2	
11/28/2022	23	60	10.4		196		8		33		76		5	5		13	13	310	309	165.6	165.7

Average:
Geometric Mean Average:

Limit:

188	4
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

87
≥ 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 11/28/22

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.
11/28/2022	0	60	10.0		174		7		33		78		1			14		310		166.1	
11/28/2022	1	60	9.9		183		6		29		81		2			14		310		164.7	
11/28/2022	2	60	9.9		180		14		46		68		1			14		310		168.0	
11/28/2022	3	60	9.9		188		10		35		70		1	1		14		310	310	164.4	165.8
11/28/2022	4	60	10.0		186		10		36		71		3			14		310		167.1	
11/28/2022	5	60	9.9		179		13		38		66		2			14		310		165.1	
11/28/2022	6	60	9.8		185		5		25		79		2			13		310		163.4	
11/28/2022	7	60	9.6		195		5		23		78		3	3		14	14	310	310	165.5	165.3
11/28/2022	8	60	9.9		190		9		30		70		5			14		310		166.1	
11/28/2022	9	60	10.2		194		10		29		68		6			14		310		165.9	
11/28/2022	10	60	10.3		187		3		13		78		5			14		310		166.5	
11/28/2022	11	60	10.3		196		4		19		79		4	5		14		310	310	166.0	166.2
11/28/2022	12	60	10.0		198		3		20		84		5			14		310		167.7	
11/28/2022	13	60	10.7		184		19		21		11		4			14		310		164.5	
11/28/2022	14	60	10.0		198		5		14		64		5			14		310		166.7	
11/28/2022	15	60	9.7		197		2		11		86		4	5		14	14	310	310	166.0	166.2
11/28/2022	16	60	10.1		195		2		11		84		3			14		310		165.3	
11/28/2022	17	60	10.5		197		2		11		83		3			14		310		165.8	
11/28/2022	18	60	10.4		195		2		11		85		3			14		310		165.2	
11/28/2022	19	60	10.5		195		4		18		80		2	3		14		310	310	165.5	165.4
11/28/2022	20	60	10.6		197		4		16		75		3			14		310		165.6	
11/28/2022	21	60	10.5		198		3		14		76		3			14		310		166.3	
11/28/2022	22	60	10.7		197		3		11		71		3			14		310		166.1	
11/28/2022	23	60	10.7		196		3		11		78		4	3		14	14	310	310	166.3	166.0

Average:
Geometric Mean Average:

Limit:

191	5
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

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76
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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 28-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	3	3	2	2	2	2	2	2	2	2	2
1	2	2	3	2	2	2	2	2	2	2	2
2	3	3	3	3	3	3	3	2	2	3	3
3	2	3	3	3	3	3	3	3	3	3	3
4	2	3	3	3	3	3	3	3	3	3	3
5	3	3	3	3	3	3	3	3	3	3	3
6	2	IC	7	IC	3	3	3	3	2	3	3
7	3	3	3	3	2	2	2	2	3	2	2
8	3	2	3	3	3	3	3	3	3	3	3
9	3	3	3	3	3	3	3	3	3	3	3
10	3	3	3	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	3	3	2	2	2	3	3	2	2
15	3	2	2	3	3	3	3	3	2	3	3
16	3	3	2	3	2	3	2	3	2	3	2
17	3	3	3	3	3	3	3	3	3	3	3
18	3	2	3	3	3	3	3	3	3	3	3
19	3	3	3	3	3	3	3	3	3	3	3
20	3	3	3	3	3	3	3	3	3	3	3
21	3	3	3	3	3	3	3	3	3	3	3
22	3	3	3	3	3	3	3	3	3	3	3
23	3	3	3	3	3	3	3	3	3	3	3

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 28-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	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	2	2	2	2
8	2	2	2	2	2	2	2	2	2	2	2
9	2	1	2	1	1	2	2	2	2	2	1
10	2	2	2	2	2	2	2	2	2	2	2
11	1	1	1	1	2	1	1	1	2	1	1
12	2	2	2	2	2	2	2	2	2	2	2
13	2	2	2	2	3	3	3	2	2	3	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	1	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