



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



Date 1/15/22

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.
1/15/2022	0	60	10.2		170		12		22		47		9			14		309		166.2	
1/15/2022	1	60	10.6		180		9		19		55		8			14		310		164.3	
1/15/2022	2	60	10.5		177		13		27		50		11			14		309		164.4	
1/15/2022	3	60	10.6		176		22		28		21		9	9		14		309	309	165.3	165.1
1/15/2022	4	60	10.7		182		16		21		26		8			14		309		162.9	
1/15/2022	5	60	10.6		181		14		18		18		7			14		309		162.1	
1/15/2022	6	60	10.3		182		19		18		0		7			14		310		165.3	
1/15/2022	7	60	10.2		171		10		16		38		6	7		14	14	309	309	165.5	164.0
1/15/2022	8	60	10.4		174		12		22		44		6			14		309		164.3	
1/15/2022	9	60	10.5		178		15		22		33		7			14		309		164.7	
1/15/2022	10	60	10.6		174		11		15		26		6			14		309		164.4	
1/15/2022	11	60	10.7		178		16		23		29		6	6		14		309	309	163.4	164.2
1/15/2022	12	60	10.6		177		19		30		37		6			14		310		164.9	
1/15/2022	13	60	10.6		180		22		35		37		7			14		309		165.9	
1/15/2022	14	60	10.3		171		20		34		40		7			14		309		166.8	
1/15/2022	15	60	10.3		177		17		37		52		6	7		14	14	309	309	165.3	165.7
1/15/2022	16	60	10.3		168		14		37		63		7			14		309		164.7	
1/15/2022	17	60	10.3		170		20		39		48		6			14		309		168.9	
1/15/2022	18	60	10.6		186		19		50		61		7			14		310		164.1	
1/15/2022	19	60	10.3		180		19		47		59		6	6		14		309	309	165.4	165.8
1/15/2022	20	60	10.3		175		22		64		65		6			14		310		167.0	
1/15/2022	21	60	10.7		186		27		75		64		5			14		309		165.6	
1/15/2022	22	60	10.6		180		22		64		66		6			14		310		163.6	
1/15/2022	23	60	10.3		178		20		53		62		6	6		14	14	309	309	165.4	165.4

Average:
Geometric Mean Average:

Limit:

177	17	OR	46
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

see above	see above	see above
≤ 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 1/15/22

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.
1/15/2022	0	60	9.1		187		0		35		100		3			15		310		165.4	
1/15/2022	1	60	9.2		179		0		29		100		3			15		310		165.8	
1/15/2022	2	60	9.3		177		0		30		100		3			15		310		166.2	
1/15/2022	3	60	9.3		179		0		33		99		3	3		15		310	310	165.8	165.8
1/15/2022	4	60	9.3		166		3		38		91		3			15		310		166.5	
1/15/2022	5	60	9.5		175		3		28		88		2			16		310		165.2	
1/15/2022	6	60	9.3		189		1		26		95		2			15		310		165.8	
1/15/2022	7	60	9.2		191		0		26		100		2	2		14	15	310	310	166.2	165.9
1/15/2022	8	60	9.4		191		6		46		88		3			14		310		165.9	
1/15/2022	9	60	9.4		186		2		33		94		3			13		310		165.8	
1/15/2022	10	60	9.3		176		0		25		99		2			13		310		165.4	
1/15/2022	11	60	9.6		172		2		30		94		3	3		13		310	310	165.7	165.7
1/15/2022	12	60	9.6		175		2		33		94		3			13		310		164.7	
1/15/2022	13	60	9.6		186		14		62		77		4			13		310		164.5	
1/15/2022	14	60	9.4		177		4		41		90		3			13		310		165.9	
1/15/2022	15	60	9.3		186		2		32		95		3	3		13	13	310	310	165.7	165.2
1/15/2022	16	60	9.4		179		3		41		93		3			13		310		165.6	
1/15/2022	17	60	9.3		183		7		51		86		3			13		310		166.0	
1/15/2022	18	60	9.3		181		14		80		82		3			13		310		165.1	
1/15/2022	19	60	9.3		182		15		75		80		3	3		13		310	310	165.7	165.6
1/15/2022	20	60	9.3		167		3		41		94		2			13		310		166.1	
1/15/2022	21	60	9.3		170		6		51		89		2			13		310		165.7	
1/15/2022	22	60	9.4		180		25		107		77		3			14		310		165.7	
1/15/2022	23	60	9.4		180		17		82		79		2	2		14	13	310	310	165.8	165.8

Average:
Geometric Mean Average:

Limit:

180	2
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

96
≥ 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 15-Jan-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	2	IC	5	IC	1	1	1	1	1	1	2
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 15-Jan-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	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