



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



Date 3/11/22

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.
3/11/2022	0	60	9.9		188		20		67		70		6			15		309		164.3	
3/11/2022	1	60	10.3		199		35		124		72		5			16		309		163.4	
3/11/2022	2	60	10.1		197		22		67		67		5			18		309		165.0	
3/11/2022	3	60	10.2		198		24		74		68		4	5		14		309	309	165.8	164.6
3/11/2022	4	60	10.2		198		29		96		70		5			17		310		164.1	
3/11/2022	5	60	10.1		199		22		70		69		5			16		309		164.7	
3/11/2022	6	60	10.1		199		22		67		67		5			16		309		165.5	
3/11/2022	7	60	10.1		196		25		80		69		5	5		16	16	309	309	167.1	165.4
3/11/2022	8	60	10.1		195		22		83		73		7			16		309		167.1	
3/11/2022	9	60	10.0		199		19		67		72		6			16		309		164.6	
3/11/2022	10	60	10.0		197		22		82		73		6			17		309		165.0	
3/11/2022	11	60	10.0		198		16		70		77		5	6		15		309	309	166.8	165.9
3/11/2022	12	60	9.9		198		8		53		85		5			15		309		165.9	
3/11/2022	13	60	10.1		198		8		50		85		6			15		309		163.9	
3/11/2022	14	60	10.0		198		6		46		87		6			16		310		165.7	
3/11/2022	15	60	10.1		196		9		55		84		5	6		15	16	309	309	165.2	165.2
3/11/2022	16	60	10.4		192		27		111		76		5			15		309		164.2	
3/11/2022	17	60	10.3		195		23		106		79		5			16		309		165.7	
3/11/2022	18	60	10.3		198		27		111		76		5			17		309		165.0	
3/11/2022	19	60	10.2		197		31		127		75		6	5		16		309	309	165.1	165.0
3/11/2022	20	60	10.2		198		18		78		77		6			15		310		163.6	
3/11/2022	21	60	10.0		199		22		70		69		6			15		310		165.2	
3/11/2022	22	60	10.0		197		18		60		70		6			16		309		164.8	
3/11/2022	23	60	9.9		197		21		86		76		6	6		15	16	310	310	164.5	164.5

Average: Geometric Mean Average:	197	19	OR	75	see above	see above	see above	see above
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 ppmc 4-HR Block Average	≤ 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 3/11/22

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.
3/11/2022	0	60	9.2		180		21		50		58		2			12		310		166.6	
3/11/2022	1	60	9.3		181		21		67		68		3			14		310		166.4	
3/11/2022	2	60	9.4		176		16		45		64		3			14		310		166.8	
3/11/2022	3	60	9.4		170		21		43		51		2	3		15		310	310	166.2	166.5
3/11/2022	4	60	9.6		153		21		42		50		4			15		310		165.3	
3/11/2022	5	60	9.4		166		25		63		61		3			16		310		166.7	
3/11/2022	6	60	9.4		161		21		45		53		3			16		310		166.4	
3/11/2022	7	60	9.6		174		24		71		66		3	3		16	15	310	310	165.8	166.1
3/11/2022	8	60	10.3		153		27		92		71		8			16		310		156.7	
3/11/2022	9	60	9.6		172		27		113		76		6			15		311		159.7	
3/11/2022	10	60	9.7		161		15		47		68		4			14		310		157.4	
3/11/2022	11	60	9.4		179		15		49		70		2	5		13		310	310	164.8	159.7
3/11/2022	12	60	8.9		188		5		43		89		3			14		310		165.5	
3/11/2022	13	60	9.0		191		5		34		87		2			16		310		164.2	
3/11/2022	14	60	9.0		179		6		29		81		3			11		310		165.7	
3/11/2022	15	60	8.9		187		9		40		76		3	3		14	14	310	310	166.3	165.4
3/11/2022	16	60	9.2		182		20		64		68		2			11		310		165.6	
3/11/2022	17	60	9.5		180		23		98		77		2			17		310		162.4	
3/11/2022	18	60	9.2		180		19		65		70		3			12		310		165.7	
3/11/2022	19	60	9.2		188		18		66		73		2	2		15		310	310	165.5	164.8
3/11/2022	20	60	9.1		181		23		77		70		2			13		309		165.5	
3/11/2022	21	60	9.1		185		17		52		68		2			16		310		165.3	
3/11/2022	22	60	9.2		190		24		70		66		2			16		310		166.0	
3/11/2022	23	60	9.2		186		25		83		70		2	2		16	15	309	310	165.7	165.6

Average:
Geometric Mean Average:

Limit:

177	17
≤ 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 OPACITY REPORT



Date 11-Mar-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	1	1	2	2	1	1	1
16	2	1	2	2	2	2	2	2	2	2	1
17	1	2	2	2	2	2	2	2	2	2	1
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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 11-Mar-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