



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



Date 3/8/22

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.
3/8/2022	0	60	10.1		192		22		50		57		3			16		309		165.7	
3/8/2022	1	60	10.3		197		23		55		59		2			14		309		166.2	
3/8/2022	2	60	10.1		200		21		52		60		3			14		309		165.7	
3/8/2022	3	60	10.0		198		24		67		65		4	3		15		310	309	166.5	166.0
3/8/2022	4	60	10.1		197		23		70		67		5			15		309		167.3	
3/8/2022	5	60	10.2		198		24		65		64		4			14		309		165.5	
3/8/2022	6	60	10.2		199		22		51		57		5			15		309		164.8	
3/8/2022	7	60	10.1		198		21		33		38		4	5		14	15	309	309	165.7	165.8
3/8/2022	8	60	10.2		192		18		59		69		4			15		309		162.9	
3/8/2022	9	60	10.2		196		11		48		77		4			15		309		165.0	
3/8/2022	10	60	10.3		198		44		141		68		5			15		310		164.0	
3/8/2022	11	60	10.2		201		30		113		74		4	5		16		309	309	167.1	164.8
3/8/2022	12	60	10.5		196		24		80		70		4			15		309		164.6	
3/8/2022	13	60	10.3		201		25		93		73		3			16		310		163.3	
3/8/2022	14	60	10.4		197		25		85		71		4			16		309		165.0	
3/8/2022	15	60	10.3		199		13		51		74		4	4		15	15	310	309	165.3	164.5
3/8/2022	16	60	10.3		196		17		69		75		9			15		309		165.0	
3/8/2022	17	60	10.3		195		21		87		76		5			14		309		165.3	
3/8/2022	18	60	10.2		199		21		67		69		3			14		310		165.2	
3/8/2022	19	60	10.3		198		21		68		69		3	5		13		309	309	166.0	165.4
3/8/2022	20	60	10.2		199		22		69		68		4			13		310		166.3	
3/8/2022	21	60	10.2		198		30		92		67		5			13		309		167.7	
3/8/2022	22	60	10.3		198		26		101		74		5			16		309		166.4	
3/8/2022	23	60	10.3		197		24		78		70		4	5		11	14	309	309	164.5	166.2

Average:
Geometric Mean Average:

Limit:

197	22
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

68
≥ 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 3/8/22

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
3/8/2022	0	60	9.1		176		11		9		0		2		12		305		166.4	
3/8/2022	1	60	9.1		182		11		9		0		2		15		305		166.9	
3/8/2022	2	60	9.0		184		16		13		0		2		15		305		167.0	
3/8/2022	3	60	9.1		185		16		6		0		3	2	15		305	305	166.4	166.7
3/8/2022	4	60	9.2		185		21		24		10		3		16		305		166.9	
3/8/2022	5	60	9.2		183		20		29		30		2		15		305		166.9	
3/8/2022	6	60	9.3		183		22		15		0		3		14		309		166.5	
3/8/2022	7	60	9.3		172		18		3		0		3	3	13	14	310	307	166.9	166.8
3/8/2022	8	60	9.4		179		19		39		51		3		14		310		166.4	
3/8/2022	9	60	9.3		176		16		41		61		3		15		310		167.0	
3/8/2022	10	60	9.6		178		28		79		65		4		15		315		166.5	
3/8/2022	11	60	9.3		191		43		156		72		4	3	14		309	311	166.9	166.7
3/8/2022	12	60	9.6		180		18		73		75		2		15		304		167.1	
3/8/2022	13	60	9.8		174		24		73		67		1		16		304		167.4	
3/8/2022	14	60	9.6		184		19		61		69		2		16		305		166.8	
3/8/2022	15	60	9.3		188		8		40		80		2	2	16	15	307	305	166.0	166.8
3/8/2022	16	60	9.3		187		11		42		73		3		14		311		166.8	
3/8/2022	17	60	9.4		182		16		41		62		2		13		308		166.7	
3/8/2022	18	60	9.9		184		14		38		62		2		14		313		163.1	
3/8/2022	19	60	9.4		180		21		58		64		5	3	14		309	310	166.5	165.8
3/8/2022	20	60	9.6		180		21		57		63		4		15		309		166.1	
3/8/2022	21	60	9.6		181		42		110		62		3		15		306		167.1	
3/8/2022	22	60	9.6		187		46		104		56		3		16		308		166.1	
3/8/2022	23	60	9.7		180		26		82		68		1	3	15	15	304	307	166.4	166.4

Average:
Geometric Mean Average:

Limit:

182	19
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

44
≥ 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 08-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	1	1	1	1	1	1	1	1	1	1	1
1	1	2	1	2	1	1	1	1	2	1	1
2	1	2	2	2	2	2	1	1	1	2	1
3	2	2	1	2	2	2	2	2	2	2	1
4	1	2	1	1	2	2	2	2	2	2	1
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	1	2	2	2	1
10	1	1	1	1	1	1	1	1	1	1	1
11	2	2	2	1	2	2	1	1	1	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	2	2	2	2	2	2	1	1	1	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	2	2	1	2	2	2	1	1
20	2	2	2	2	2	2	2	2	1	2	1
21	2	2	2	2	2	2	1	2	2	2	1
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 08-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