



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



Date 3/8/23

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.
3/8/2023	0	60	10.5		199		17		75		78		5			12		310		165.7	
3/8/2023	1	60	10.6		199		25		114		78		5			14		309		166.0	
3/8/2023	2	60	10.4		198		21		99		78		5			14		309		166.7	
3/8/2023	3	60	10.4		200		19		70		73		5	5		14		309	309	166.4	166.2
3/8/2023	4	60	10.2		200		11		61		83		5			14		309		166.7	
3/8/2023	5	60	10.4		198		9		55		85		5			13		310		165.4	
3/8/2023	6	60	10.3		197		2		42		95		6			14		310		166.6	
3/8/2023	7	60	10.6		199		9		34		74		4	5		13	14	308	309	168.3	166.7
3/8/2023	8	60	10.5		200		5		35		85		5			14		310		166.3	
3/8/2023	9	60	10.8		200		10		55		81		6			13		308		168.1	
3/8/2023	10	60	10.6		198		26		97		73		4			13		310		166.1	
3/8/2023	11	60	11.0		198		23		88		74		3	4		13		308	309	168.3	167.2
3/8/2023	12	60	10.8		201		19		75		75		4			13		310		165.7	
3/8/2023	13	60	10.4		197		11		53		80		6			13		310		166.5	
3/8/2023	14	60	10.3		200		1		30		96		5			14		309		167.3	
3/8/2023	15	60	10.5		199		6		40		85		5	5		12	13	309	310	165.6	166.3
3/8/2023	16	60	10.4		201		3		35		91		5			13		309		167.6	
3/8/2023	17	60	10.9		195		31		120		75		4			14		309		167.7	
3/8/2023	18	60	10.8		199		12		52		77		5			16		310		165.8	
3/8/2023	19	60	10.6		199		16		58		73		4	5		14		309	309	165.9	166.8
3/8/2023	20	60	10.5		197		9		47		82		4			15		309		166.5	
3/8/2023	21	60	10.5		198		8		47		83		5			16		309		167.1	
3/8/2023	22	60	10.6		198		5		43		88		4			15		309		165.4	
3/8/2023	23	60	10.4		198		4		38		91		5	4		15	15	310	309	167.5	166.6

Average:
Geometric Mean Average:

Limit:

199	10
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

83
≥ 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 3/8/23

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.
3/8/2023	0	60	10.7		195		16		89		82		3			14		310		167.1	
3/8/2023	1	60	10.7		198		24		110		79		2			13		310		167.6	
3/8/2023	2	60	10.8		199		20		90		78		2			13		310		167.9	
3/8/2023	3	60	10.8		196		11		62		82		2	2		14		310	310	167.0	167.4
3/8/2023	4	60	10.7		198		5		51		91		3			12		310		167.2	
3/8/2023	5	60	10.8		199		13		64		80		2			14		310		167.5	
3/8/2023	6	60	11.2		197		7		45		84		3			13		310		168.3	
3/8/2023	7	60	10.8		195		5		42		87		3	3		13	13	310	310	166.0	167.2
3/8/2023	8	60	10.8		197		3		35		92		2			13		311		169.4	
3/8/2023	9	60	11.2		197		5		36		85		2			14		309		167.8	
3/8/2023	10	60	11.0		195		17		57		71		2			12		310		167.3	
3/8/2023	11	60	11.1		182		7		35		79		2	2		13		310	310	167.7	168.1
3/8/2023	12	60	11.1		190		14		56		74		2			11		310		167.6	
3/8/2023	13	60	10.8		189		5		34		85		2			13		310		168.2	
3/8/2023	14	60	10.9		195		0		11		98		1			12		310		166.9	
3/8/2023	15	60	10.7		181		7		33		79		2	2		10	12	310	310	168.2	167.7
3/8/2023	16	60	10.9		174		0		13		99		1			13		310		167.3	
3/8/2023	17	60	10.7		196		9		48		81		1			13		310		166.4	
3/8/2023	18	60	10.6		197		10		44		78		2			15		310		168.0	
3/8/2023	19	60	10.6		196		15		45		67		2	2		13		310	310	167.7	167.4
3/8/2023	20	60	10.7		195		9		39		77		2			14		310		167.3	
3/8/2023	21	60	10.7		194		6		32		82		1			14		310		167.5	
3/8/2023	22	60	10.7		195		0		16		99		1			13		310		167.4	
3/8/2023	23	60	10.7		194		4		32		89		1	1		14	14	310	310	167.8	167.5

Average: Geometric Mean Average:	193	5	OR	87	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 OPACITY REPORT



Date 08-Mar-2023

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	3	2	2		
1	3	2	3	3	3	3	3	3	3	3	3		
2	2	3	3	3	3	3	2	2	2	3	3		
3	2	2	2	2	2	2	2	2	2	2	2		
4	3	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	3	3	2	3		
7	3		2		2	2	2	2	2	2	2		
8	3		2		2	2	3	IM	3	IM	2	IM	2
9	3		3		3	3	2		2	3	3	3	3
10	2		2		3	2	3		2	3	3	3	2
11	3		3		3	3	2		2	2	2	2	2
12	2		2		2	2	2		2	2	2	2	2
13	2		2		2	2	3		2	3	2	2	2
14	3		3		3	3	3		3	3	3	3	3
15	3		3		3	2	2		3	2	2	2	2
16	3		2		3	2	3		3	3	2	3	3
17	3		3		4	3	3		2	2	3	3	3
18	3		3		2	2	2		2	2	2	2	2
19	2		2		2	2	3		2	3	3	3	2
20	2		2		3	3	3		2	2	3	3	2
21	3		3		2	2	3		2	2	3	3	2
22	3		3		3	2	2		2	2	3	3	3
23	3		3		3	3	3		2	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 08-Mar-2023

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	0	0	0	0	1	0	1	0	0	0	0
1	1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	2	IBC	5	IBC	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	1	0	0	0	0	IM	0	IM	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	1	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	1	0	0	0
13	0	0	0	0	0	1	1	1	1	1	0
14	1	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	1	0	0
19	1	0	1	0	0	0	0	0	0	0	0
20	0	1	1	0	0	1	0	0	0	1	0
21	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0

Status Flags

I - Invalid C - Calibration F - Offline T - Out of Control ^ - Startup
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown