



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



Date 1/13/23

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.
1/13/2023	0	60	10.8		197		9		31		70		4			13		310		163.8	
1/13/2023	1	60	10.8		199		13		34		63		4			13		309		165.6	
1/13/2023	2	60	10.7		200		12		33		64		3			13		310		167.0	
1/13/2023	3	60	10.7		198		18		49		63		4	4		13		310	310	167.3	165.9
1/13/2023	4	60	10.6		201		12		35		66		4			13		309		165.0	
1/13/2023	5	60	10.7		197		14		40		65		4			13		309		164.9	
1/13/2023	6	60	10.8		197		15		39		62		4			13		309		166.0	
1/13/2023	7	60	10.7		196		9		33		74		4	4		13	13	309	309	166.4	165.6
1/13/2023	8	60	10.6		197		20		40		49		4			13		309		166.1	
1/13/2023	9	60	10.6		199		19		54		64		5			13		309		164.6	
1/13/2023	10	60	10.6		201		22		74		71		2			14		309		167.3	
1/13/2023	11	60	10.4		197		20		87		76		5	5		13		310	309	167.1	166.3
1/13/2023	12	60	10.5		198		21		85		75		4			13		309		167.2	
1/13/2023	13	60	10.7		195		22		77		71		3			13		309		164.8	
1/13/2023	14	60	10.9		196		40		90		55		2			13		309		166.0	
1/13/2023	15	60	10.5		197		22		68		68		4	3		13	13	310	309	164.2	165.5
1/13/2023	16	60	10.5		199		20		63		68		4			13		309		168.0	
1/13/2023	17	60	10.3		198		16		66		76		4			13		309		167.7	
1/13/2023	18	60	10.4		194		12		58		79		4			13		309		166.0	
1/13/2023	19	60	10.5		198		19		75		74		4	4		13		309	309	164.5	166.6
1/13/2023	20	60	9.9		192		20		92		79		3			13		309		167.2	
1/13/2023	21	60	10.0		198		23		99		77		3			13		309		166.1	
1/13/2023	22	60	10.1		197		21		82		74		2			13		309		166.4	
1/13/2023	23	60	10.1		197		18		61		70		2	3		13	13	309	309	165.1	166.2

Average: Geometric Mean Average:	197	17	OR	70	see above	see above	see above	see above			
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 4-HR Block Average	ppmc	≥ 12 8-HR. Block Average	lb/hr	≤ 345 °F 4-HR Block Average	≤ 173 4-HR Block Average	klb/hr

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 1/13/23

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.
1/13/2023	0	60	10.0		193		5		25		82		2			13		310		166.7	
1/13/2023	1	60	10.0		190		5		24		78		2			14		310		165.9	
1/13/2023	2	60	9.9		191		3		21		84		1			14		310		166.6	
1/13/2023	3	60	9.8		194		14		53		74		4	2		13		310	310	166.3	166.4
1/13/2023	4	60	9.9		193		1		18		96		3			14		309		162.0	
1/13/2023	5	60	9.3		192		2		28		92		2			14		310		167.2	
1/13/2023	6	60	9.7		182		4		30		88		3			13		310		166.6	
1/13/2023	7	60	9.7		193		2		23		93		3	3		13	14	310	310	166.3	165.5
1/13/2023	8	60	9.6		190		4		21		82		3			14		310		167.1	
1/13/2023	9	60	9.6		193		8		57		87		3			13		310		167.2	
1/13/2023	10	60	9.9		196		6		50		88		5			13		310		165.8	
1/13/2023	11	60	9.8		191		12		69		82		3	4		13		310	310	166.4	166.6
1/13/2023	12	60	9.7		191		15		71		79		2			14		310		166.4	
1/13/2023	13	60	10.0		198		5		47		90		1			13		310		166.3	
1/13/2023	14	60	9.6		189		9		48		80		2			13		310		166.3	
1/13/2023	15	60	9.7		193		10		59		83		3	2		13	14	310	310	166.5	166.4
1/13/2023	16	60	9.6		192		4		46		91		3			14		310		167.0	
1/13/2023	17	60	9.7		196		4		48		92		2			14		310		165.6	
1/13/2023	18	60	9.8		198		8		49		84		2			13		311		166.5	
1/13/2023	19	60	9.9		188		4		46		92		3	3		13		309	310	166.2	166.3
1/13/2023	20	60	9.8		191		8		54		85		3			13		310		166.6	
1/13/2023	21	60	10.0		196		9		48		81		3			14		310		166.0	
1/13/2023	22	60	10.4		193		16		62		75		3			13		310		162.0	
1/13/2023	23	60	10.3		193		7		46		84		2	3		13	14	310	310	162.5	164.3

Average:
Geometric Mean Average:

Limit:

192	5
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

86
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 13-Jan-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	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	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	3	3	2	2	3	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 13-Jan-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	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	IBC	5	IBC	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