



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



Date 5/29/23

Wheel Plant Wheelabrator North Andover
Unit 1 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.
5/29/2023	0	60	9.9		104		11		87		88		109			13		309		164.3	
5/29/2023	1	60	9.7		132		6		75		91		4			13		309		167.0	
5/29/2023	2	60	9.6		136		5		67		92		2			13		310		164.0	
5/29/2023	3	60	9.6		131		8		77		89		2	29		13		309	309	164.2	164.9
5/29/2023	4	60	9.3		125		2		63		97		2			13		310		166.2	
5/29/2023	5	60	9.2		128		1		57		99		2			13		310		167.3	
5/29/2023	6	60	9.5		127		0		50		100		3			13		309		165.1	
5/29/2023	7	60	9.7		116		2		65		97		5	3		13	13	309	309	161.4	165.0
5/29/2023	8	60	9.2		121		2		61		97		5			13		311		162.4	
5/29/2023	9	60	9.3		133		3		63		95		4			13		309		167.8	
5/29/2023	10	60	9.4		135		1		49		99		4			13		309		166.8	
5/29/2023	11	60	9.5		124		0		46		100		6	5		13		309	310	164.1	165.3
5/29/2023	12	60	9.3		121		23		130		83		9			13		313		165.8	
5/29/2023	13	60	9.3		121		14		107		87		151			12		308		163.9	
5/29/2023	14	60	9.9		121		1		64		98		61			13		310		158.7	
5/29/2023	15	60	9.9		108		0		43		100		4	56		13	13	308	310	151.2	159.9
5/29/2023	16	60	9.4		107		0		48		100		6			13		310		158.1	
5/29/2023	17	60	9.4		132		1		52		99		3			13		310		166.1	
5/29/2023	18	60	9.3		116		0		60		100		4			13		309		162.7	
5/29/2023	19	60	9.5		128		5		62		92		3	4		12		309	309	166.7	163.4
5/29/2023	20	60	9.6		137		9		63		85		3			13		309		163.1	
5/29/2023	21	60	9.4		135		6		61		89		3			13		309		165.1	
5/29/2023	22	60	9.2		124		8		62		87		3			13		310		163.9	
5/29/2023	23	60	9.7		124		5		53		90		11	5		13	13	308	309	161.4	163.4

Average:
Geometric Mean Average:

Limit:

124	2
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

98
≥ 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

- 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 5/29/23

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.
5/29/2023	0	60	11.5		140		13		24		45		4			13		310		167.6	
5/29/2023	1	60	11.4		147		6		9		33		3			13		310		166.8	
5/29/2023	2	60	11.4		141		7		11		34		3			13		310		165.8	
5/29/2023	3	60	11.4		143		5		6		16		3	3		13		310	310	166.3	166.6
5/29/2023	4	60	11.7		145		3		1		0		4			12		310		159.9	
5/29/2023	5	60	11.1		145		4		8		58		2			12		310		170.4	
5/29/2023	6	60	11.2		140		3		3		0		3			12		310		167.6	
5/29/2023	7	60	11.5		143		8		8		5		2	3		12	13	309	310	168.7	166.7
5/29/2023	8	60	11.5		145		14		13		0		3			13		310		165.7	
5/29/2023	9	60	11.5		145		12		9		0		5			13		310		166.8	
5/29/2023	10	60	11.3		141		11		8		0		4			14		310		166.1	
5/29/2023	11	60	11.2		151		9		9		0		4	4		13		310	310	167.1	166.4
5/29/2023	12	60	11.2		143		17		28		41		5			13		310		167.2	
5/29/2023	13	60	11.5		149		9		9		0		7			13		311		168.2	
5/29/2023	14	60	11.6		146		8		9		11		6			13		310		165.5	
5/29/2023	15	60	11.5		154		20		42		52		6	6		12	13	310	310	165.3	166.5
5/29/2023	16	60	11.2		144		8		17		52		4			14		310		167.3	
5/29/2023	17	60	11.3		152		7		10		31		4			12		310		166.4	
5/29/2023	18	60	11.2		163		9		16		43		6			13		310		166.8	
5/29/2023	19	60	11.5		153		7		6		0		4	4		13		310	310	163.4	166.0
5/29/2023	20	60	11.5		166		6		1		0		4			13		310		166.1	
5/29/2023	21	60	11.5		167		15		10		0		3			13		310		165.5	
5/29/2023	22	60	11.3		156		13		3		0		5			13		310		165.3	
5/29/2023	23	60	11.4		153		8		1		0		3	4		12	13	310	310	164.6	165.4

Average:
Geometric Mean Average:

Limit:

149	8
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

0
≥ 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

see above
≤ 173 4-HR Block Average klb/hr

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 29-May-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	0	0	0	0	0	0	0	0	0	0	0
1	0	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	3	IC	5	IC	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	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	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0
14	0	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	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 29-May-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	3	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