



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



Date 6/11/23

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.
6/11/2023	0	60	10.2		122		12		88		87		4			13		310		166.5	
6/11/2023	1	60	10.1		139		4		64		94		4			13		310		167.3	
6/11/2023	2	60	10.1		137		6		66		91		4			12		309		167.2	
6/11/2023	3	60	10.2		137		5		68		93		4	4		13		310	310	166.9	167.0
6/11/2023	4	60	10.2		133		1		62		98		3			13		310		165.7	
6/11/2023	5	60	9.9		135		2		55		97		4			13		309		167.4	
6/11/2023	6	60	10.2		133		0		45		100		4			13		309		164.5	
6/11/2023	7	60	10.0		117		0		61		100		5	4		13	13	309	309	164.5	165.6
6/11/2023	8	60	10.0		124		4		76		95		4			13		309		169.5	
6/11/2023	9	60	10.2		139		11		88		88		3			13		310		167.8	
6/11/2023	10	60	10.5		131		12		94		87		3			13		309		164.9	
6/11/2023	11	60	9.7		132		3		71		95		3	3		13		309	309	167.7	167.5
6/11/2023	12	60	9.7		133		4		72		95		3			13		309		167.5	
6/11/2023	13	60	9.7		131		5		75		93		3			12		310		167.9	
6/11/2023	14	60	10.1		126		2		61		97		3			12		310		164.8	
6/11/2023	15	60	10.0		124		4		68		94		3	3		13	12	309	310	167.4	166.9
6/11/2023	16	60	10.2		132		3		67		96		3			12		309		168.1	
6/11/2023	17	60	10.2		123		4		75		94		4			12		309		165.9	
6/11/2023	18	60	10.3		136		1		61		98		3			12		310		165.3	
6/11/2023	19	60	10.0		134		2		68		97		3	3		13		310	309	165.9	166.3
6/11/2023	20	60	10.2		132		1		62		98		4			12		309		164.4	
6/11/2023	21	60	10.0		133		1		66		98		3			12		310		167.6	
6/11/2023	22	60	9.7		116		0		63		100		4			13		309		167.5	
6/11/2023	23	60	9.8		115		1		64		98		5	4		13	12	309	309	167.4	166.7

Average:
Geometric Mean Average:

Limit:

130	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 6/11/23

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.
6/11/2023	0	60	10.5		140		21		66		68		2			12		310		166.5	
6/11/2023	1	60	10.5		140		18		57		68		1			13		310		166.8	
6/11/2023	2	60	10.5		139		19		50		62		1			13		310		166.7	
6/11/2023	3	60	10.7		138		6		35		83		2	2		13		310	310	165.9	166.5
6/11/2023	4	60	10.6		141		7		43		84		4			13		310		167.4	
6/11/2023	5	60	10.5		140		4		24		85		2			12		310		166.0	
6/11/2023	6	60	10.4		141		3		20		84		1			13		310		165.9	
6/11/2023	7	60	10.3		138		8		31		74		2	2		13	13	310	310	168.2	166.9
6/11/2023	8	60	10.6		141		17		61		72		2			12		310		165.6	
6/11/2023	9	60	11.4		137		7		41		83		3			13		311		149.5	
6/11/2023	10	60	10.5		141		13		56		76		2			13		310		168.0	
6/11/2023	11	60	10.6		138		8		40		79		3	2		14		310	310	167.6	162.7
6/11/2023	12	60	10.6		140		13		50		74		1			13		310		168.4	
6/11/2023	13	60	10.8		139		11		42		74		3			13		310		166.6	
6/11/2023	14	60	10.7		133		10		43		76		2			15		310		167.3	
6/11/2023	15	60	10.7		140		13		52		76		1	2		14	13	310	310	167.9	167.5
6/11/2023	16	60	11.0		140		7		39		82		2			15		310		165.6	
6/11/2023	17	60	10.9		138		2		32		92		2			15		310		166.6	
6/11/2023	18	60	10.8		140		8		43		82		3			14		310		166.0	
6/11/2023	19	60	10.7		139		6		41		87		2	2		15		310	310	167.6	166.4
6/11/2023	20	60	10.9		136		11		49		78		4			15		310		164.9	
6/11/2023	21	60	11.7		139		4		30		87		6			15		310		155.2	
6/11/2023	22	14	18.5	IF	302	IF	14	IF	34	IBF	58	IBF	2120	IF		14		309		86.1	
6/11/2023	23	0	20.8	IF	16	IF	4	IF	-414	IBF	0	IBF	42	IF	5	0	15	290	310	13.0	160.1

Average:
Geometric Mean Average:

Limit:

139	8	80	see above	see above	see above
≤ 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
OR					
				≤ 173 klb/hr 4-HR Block Average	

Status Flags

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 11-Jun-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	1	1	0	1
7	0	1	1	1	1	1	1	1	1	1	0
8	0	1	1	1	0	0	0	0	0	0	0
9	0	0	1	0	0	0	0	0	1	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 11-Jun-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	2	2	1	1	1	1	1	2	1	1
1	1	2	1	1	1	1	1	1	1	1	1
2	2	1	1	2	1	1	1	2	1	1	1
3	1	1	1	1	2	2	1	1	1	2	1
4	1	1	1	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	2	2	1	1
6	3	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	1	2	2	2
11	2	2	1	1	1	1	2	1	1	1	1
12	1	1	1	2	2	2	2	2	2	2	1
13	2	2	1	2	2	2	1	1	1	2	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	2	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	2	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	IF	1	IF	1	IF	1	IF	1	IF	1
23	1	IF	1	IF	1	IF	1	IF	1	IF	1

Status Flags

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