



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



Date 4/6/23

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.
4/6/2023	0	60	9.3		139		15		100		85		10			13		309		164.5	
4/6/2023	1	60	9.1		139		12		82		85		9			11		309		164.8	
4/6/2023	2	60	9.2		140		9		77		88		9			12		309		165.2	
4/6/2023	3	60	9.3		132		14		106		87		9	9		13		309	309	165.2	164.9
4/6/2023	4	60	9.6		136		11		74		85		9			13		310		164.2	
4/6/2023	5	60	9.4		139		18		108		83		11			13		309		165.0	
4/6/2023	6	60	9.8		140		28		141		80		12			13		309		162.2	
4/6/2023	7	60	10.6		138		14		86		84		12	11		15	13	309	309	140.8	158.0
4/6/2023	8	60	10.7		131		3		58		95		12			15		309		134.5	
4/6/2023	9	60	10.6		132		4		74		95		20			14		309		134.8	
4/6/2023	10	60	10.7		134		6		79		92		15			13		309		135.1	
4/6/2023	11	60	10.3		120		0		62		100		14	15		12		310	309	134.8	134.8
4/6/2023	12	60	10.2		123		0		44		100		11			13		309		133.8	
4/6/2023	13	60	10.7		131		0		45		100		29			12		309		141.2	
4/6/2023	14	60	10.4		133		0		56		100		12			13		309		139.8	
4/6/2023	15	60	10.1		132		0		46		100		10	16		13	13	309	309	141.8	139.1
4/6/2023	16	60	9.2		136		0		60		100		10			13		310		160.9	
4/6/2023	17	60	9.2		137		1		68		98		10			13		309		165.0	
4/6/2023	18	60	9.2		140		1		58		99		10			12		310		166.3	
4/6/2023	19	60	9.5		142		5		71		94		12	11		12		309	310	166.3	164.6
4/6/2023	20	60	9.4		140		10		78		88		10			13		309		166.4	
4/6/2023	21	60	9.7		141		17		81		79		10			13		309		166.9	
4/6/2023	22	60	9.6		141		18		102		82		10			13		309		167.0	
4/6/2023	23	60	9.5		140		16		79		80		10	10		13	13	309	309	166.1	166.6

Average:
Geometric Mean Average:

Limit:

136	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



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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.
4/6/2023	0	60	10.4		140		11		40		71		1			13		310		166.1	
4/6/2023	1	60	10.4		139		5		27		80		1			14		310		166.0	
4/6/2023	2	60	10.4		140		4		23		83		1			15		310		166.8	
4/6/2023	3	60	10.4		139		7		29		76		2	I		14		310	310	165.9	166.2
4/6/2023	4	60	10.5		143		10		29		67		2			13		310		166.2	
4/6/2023	5	60	10.7		140		9		24		64		1			14		310		166.8	
4/6/2023	6	60	11.2		134		19		50		62		2			13		309		162.5	
4/6/2023	7	60	12.2		140		11		29		60		2	2		15	14	310	310	135.2	157.7
4/6/2023	8	60	12.0		140		2		14		83		3			13		310		133.2	
4/6/2023	9	60	12.0		138		10		19		49		2			15		310		135.1	
4/6/2023	10	60	12.0		140		1		13		95		2			15		310		134.6	
4/6/2023	11	60	11.7		140		4		21		82		2	2		14		310	310	135.0	134.5
4/6/2023	12	60	11.7		139		2		16		86		1			14		310		134.1	
4/6/2023	13	60	11.3		140		6		20		72		1			13		310		138.6	
4/6/2023	14	60	11.1		140		2		14		83		2			14		310		141.2	
4/6/2023	15	60	10.8		141		0		10		98		2	1		13	14	310	310	144.9	139.7
4/6/2023	16	60	10.0		141		1		18		94		1			13		310		162.8	
4/6/2023	17	60	10.0		142		2		18		91		1			13		310		164.6	
4/6/2023	18	60	10.0		139		2		17		91		2			14		310		167.4	
4/6/2023	19	60	10.0		141		2		18		87		2	1		14		310	310	167.6	165.6
4/6/2023	20	60	10.1		139		4		20		79		1			15		310		167.5	
4/6/2023	21	60	10.4		137		10		27		62		1			16		310		167.5	
4/6/2023	22	60	10.0		141		12		35		67		1			16		310		168.1	
4/6/2023	23	60	10.0		140		5		18		70		1	1		15	15	310	310	166.8	167.4

Average:
Geometric Mean Average:

Limit:

140	4
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

82
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 06-Apr-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	1	1	1	1	1	1	1	2	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	IC	5	IC	1	1	1	1	1	1	1
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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 06-Apr-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	2	2	2	2	2	2	2	2	2	2	2
1	2	2	2	2	2	1	2	1	2	1	2
2	2	2	2	2	1	1	1	2	1	1	1
3	2	1	2	2	2	1	2	2	2	1	2
4	2	1	2	2	2	2	2	1	1	2	2
5	2	2	2	1	1	1	1	2	2	1	1
6	3	IBC	6	IBC	2	2	2	2	2	2	2
7	2	2	2	1	1	1	1	1	2	1	2
8	1	1	1	1	1	1	1	1	1	1	1
9	2	2	2	2	2	2	2	2	2	2	2
10	2	1	2	1	1	1	1	1	2	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	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0
16	1	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	1	0	0	0	1	0
18	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	1	0	0
20	0	0	0	0	0	0	1	0	0	0	0
21	1	1	0	0	0	0	0	1	0	0	0
22	0	0	1	0	0	0	0	0	0	0	0
23	0	0	0	0	1	1	1	1	1	1	0

Status Flags

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