



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



Date 8/26/23

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.
8/26/2023	0	60	9.9		143		12		73		84		0			14		309		166.5	
8/26/2023	1	60	10.1		140		12		92		87		0			14		309		166.6	
8/26/2023	2	60	10.0		140		17		82		80		0			14		310		166.6	
8/26/2023	3	60	10.1		140		15		81		82		0	0		14		309	309	167.8	166.9
8/26/2023	4	60	10.0		147		15		86		83		2			13		309		165.8	
8/26/2023	5	60	10.0		141		15		85		82		0			13		310		168.1	
8/26/2023	6	60	10.0		142		14		87		84		1			14	14	310		165.6	
8/26/2023	7	60	9.9		141		11		59		82		0	1		14		309	310	162.2	165.4
8/26/2023	8	60	10.0		140		22		103		79		0			11		309		169.3	
8/26/2023	9	60	10.2		137		10		70		86		0			16		309		169.1	
8/26/2023	10	60	10.3		143		22		106		79		0			13		310		166.9	
8/26/2023	11	60	10.3		142		21		117		82		0	0		16		309	309	167.4	168.2
8/26/2023	12	60	10.3		139		32		146		78		0			18		309		168.2	
8/26/2023	13	60	10.3		143		27		130		79		0			13		310		166.7	
8/26/2023	14	60	10.4		142		23		116		80		0			16		309		167.2	
8/26/2023	15	60	10.4		139		20		81		76		0	0		17	15	310	309	165.0	166.8
8/26/2023	16	60	10.3		139		17		77		78		0			16		309		169.0	
8/26/2023	17	60	10.4		143		18		79		78		0			16		309		165.2	
8/26/2023	18	60	10.5		139		20		92		79		0			16		310		167.3	
8/26/2023	19	60	10.4		140		20		99		79		0	0		16		310	309	167.3	167.2
8/26/2023	20	60	10.5		144		21		104		80		1			16		309		168.1	
8/26/2023	21	60	10.4		141		19		101		82		0			14		310		167.3	
8/26/2023	22	60	10.3		140		26		130		80		0			13		310		167.0	
8/26/2023	23	60	10.3		141		24		125		81		1	0		13	15	309	309	169.1	167.9

Average:
Geometric Mean Average:

Limit:

141	18
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

81
≥ 80% 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 8/26/23

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.
8/26/2023	0	60	9.7		138		0		59		100		4			13		310		168.8	
8/26/2023	1	60	9.9		142		0		57		100		4			13		310		167.2	
8/26/2023	2	60	9.9		138		0		61		100		4			14		310		166.7	
8/26/2023	3	60	9.8		140		1		59		99		4	4		13		310	310	167.5	167.6
8/26/2023	4	60	9.8		142		0		65		100		5			13		310		167.5	
8/26/2023	5	60	9.8		139		4		74		95		4			13		310		167.9	
8/26/2023	6	60	9.7		141		5		70		93		110			14		309		161.3	
8/26/2023	7	60	9.9		139		1		60		99		6	31		14	13	311	310	156.5	163.3
8/26/2023	8	60	9.9		139		11		91		88		5			13		310		167.9	
8/26/2023	9	60	9.9		140		2		75		97		6			14		310		168.1	
8/26/2023	10	60	10.0		141		3		78		96		5			14		310		166.4	
8/26/2023	11	60	10.2		139		6		79		93		6	5		14		310	310	164.4	166.7
8/26/2023	12	60	10.5		140		5		72		93		8			14		310		161.5	
8/26/2023	13	60	10.5		138		8		85		91		6			15		309		167.7	
8/26/2023	14	60	10.3		141		7		78		91		4			14		310		169.0	
8/26/2023	15	60	10.5		139		1		60		98		5	6		14	14	310	310	166.8	166.2
8/26/2023	16	60	10.9		139		0		50		99		6			14		310		168.1	
8/26/2023	17	60	10.2		141		2		70		97		5			14		310		166.1	
8/26/2023	18	60	10.2		139		0		51		100		5			14		310		167.2	
8/26/2023	19	60	10.2		139		1		67		98		5	5		14		310	310	168.1	167.4
8/26/2023	20	60	10.2		142		16		107		85		5			14		310		167.3	
8/26/2023	21	60	10.3		140		9		85		89		5			14		310		167.5	
8/26/2023	22	60	10.3		139		23		131		83		5			14		310		167.6	
8/26/2023	23	60	10.3		140		11		90		88		5	5		14	14	310	310	166.7	167.3

Average:
Geometric Mean Average:

Limit:

140	2	98
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean	≥ 80% Removal Efficiency

OR

see above
≤ 69 4-HR Block Average

ppmc

see above	see above	see above
≥ 12 8-HR. Block Average	≤ 345 °F 4-HR Block Average	≤ 173 4-HR Block Average

lb/hr

°F

klb/hr

Status Flags

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 26-Aug-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	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	IC	6	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 26-Aug-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	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	2	IBC	4	IBC	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