



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



Date 9/27/23

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.
9/27/2023	0	60	10.3		141		4		50		92		0			14		280		166.3	
9/27/2023	1	60	10.1		142		7		48		86		0			14		298		166.1	
9/27/2023	2	60	10.0		140		18		59		69		0			14		310		169.4	
9/27/2023	3	60	10.3		141		19		62		70		0	0		14		309	299	166.4	167.1
9/27/2023	4	60	10.2		143		14		60		77		1			17		310		166.7	
9/27/2023	5	60	10.4		139		7		38		81		0			18		309		166.0	
9/27/2023	6	60	10.6		139		14		61		77		1			18		309		165.5	
9/27/2023	7	60	10.5		141		17		61		73		0	0		18	16	310	309	166.5	166.2
9/27/2023	8	60	10.5		142		61		195		68		1			17		310		167.4	
9/27/2023	9	60	10.5		140		31		128		76		2			17		309		166.1	
9/27/2023	10	60	10.4		141		20		84		76		9			17		309		166.2	
9/27/2023	11	60	10.4		159		27		94		71		1	3		17		309	309	165.7	166.4
9/27/2023	12	60	10.1		138		11		50		78		2			17		310		165.6	
9/27/2023	13	60	10.5		139		39		125		69		2			17		309		166.9	
9/27/2023	14	60	10.2		143		29		115		75		1			12		310		168.3	
9/27/2023	15	60	10.1		139		16		60		74		1	1		19	17	310	310	166.5	166.8
9/27/2023	16	60	10.3		143		21		59		65		0			18		310		166.1	
9/27/2023	17	60	10.2		141		18		64		72		1			17		310		167.0	
9/27/2023	18	60	10.2		142		18		59		70		0			15		309		166.8	
9/27/2023	19	60	10.4		139		34		97		65		1	1		15		310	309	167.4	166.8
9/27/2023	20	60	10.2		142		25		79		68		1			13		309		168.0	
9/27/2023	21	60	10.2		140		19		50		62		1			14		309		166.0	
9/27/2023	22	60	10.4		141		19		44		57		0			13		309		167.6	
9/27/2023	23	60	10.2		142		19		53		63		1	1		13	15	309	309	167.1	167.2

Average:
Geometric Mean Average:

Limit:

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

OR

74
≥ 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 9/27/23

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.
9/27/2023	0	60	10.3		141		17		49		65		5			13		323		167.5	
9/27/2023	1	60	10.3		139		12		47		75		5			13		314		168.9	
9/27/2023	2	60	10.2		140		8		39		79		5			15		311		167.3	
9/27/2023	3	60	10.2		141		9		41		79		4	5		8		310	314	168.5	168.0
9/27/2023	4	60	10.4		141		17		68		75		5			9		310		165.6	
9/27/2023	5	60	10.5		140		9		52		82		5			18		310		166.4	
9/27/2023	6	60	11.0		139		26		110		76		6			13	14	310		161.2	
9/27/2023	7	60	10.6		140		10		52		80		6	6		20		310	310	164.6	164.4
9/27/2023	8	60	10.5		140		17		59		71		7			16		310		167.0	
9/27/2023	9	60	10.6		141		12		50		76		6			18		310		167.3	
9/27/2023	10	60	10.5		140		21		58		64		6			23		310		168.4	
9/27/2023	11	60	10.5		141		13		58		77		6	6		24		310	310	165.8	167.1
9/27/2023	12	60	10.7		138		3		28		91		4			18		309		168.4	
9/27/2023	13	60	10.2		141		2		42		95		7			18		310		166.9	
9/27/2023	14	60	10.4		138		0		27		100		5			14		309		167.5	
9/27/2023	15	60	10.3		141		1		38		98		5	5		15	18	311	310	167.1	167.5
9/27/2023	16	60	10.6		139		6		46		87		6			15		310		166.9	
9/27/2023	17	60	10.5		140		10		51		81		6			15		311		168.0	
9/27/2023	18	60	10.5		139		7		46		85		6			14		310		168.4	
9/27/2023	19	60	10.6		140		7		49		85		6	6		12		310	310	167.0	167.6
9/27/2023	20	60	10.7		138		15		60		76		6			13		310		167.4	
9/27/2023	21	60	10.6		140		5		45		88		6			14		310		167.6	
9/27/2023	22	60	10.7		141		7		39		82		6			14		310		167.4	
9/27/2023	23	60	10.8		138		15		59		74		6	6		14	14	310	310	167.2	167.4

Average:
Geometric Mean Average:

Limit:

140	7
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

85
≥ 80% 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 27-Sep-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	0	1	1	1	0
1	1	1	1	1	0	1	1	1	1	1	0
2	1	1	1	1	1	1	1	1	1	1	1
3	1	1	1	1	1	1	0	1	1	1	0
4	1	1	1	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	0	0	1	0
6	3	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	0	1	1	1	0	0
18	1	1	1	1	1	1	1	1	0	1	0
19	1	1	0	1	1	1	0	1	1	1	0
20	1	1	0	1	1	1	1	1	1	1	0
21	1	1	0	1	1	1	1	1	1	1	0
22	1	1	1	1	1	1	1	1	1	1	1
23	1	1	1	1	1	1	1	1	0	1	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 27-Sep-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