



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



Date 4/30/23

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.
4/30/2023	0	60	9.9		137		12		110		89		2			12		309		165.1	
4/30/2023	1	60	10.0		141		8		88		91		1			12		309		164.1	
4/30/2023	2	60	10.3		142		9		76		88		1			12		309		165.6	
4/30/2023	3	60	10.2		137		9		84		89		2	2		13		310	309	163.8	164.6
4/30/2023	4	60	10.3		142		6		78		92		3			13		309		162.1	
4/30/2023	5	60	9.9		143		9		93		90		2			12		310		164.0	
4/30/2023	6	60	10.2		132		8		85		91		2			12		309		156.9	
4/30/2023	7	60	10.2		143		10		75		87		1	2		13	12	309	309	161.5	161.2
4/30/2023	8	60	10.1		141		14		70		80		1			14		310		165.3	
4/30/2023	9	60	10.1		140		11		79		87		2			15		310		164.8	
4/30/2023	10	60	10.0		140		12		83		85		2			14		309		163.0	
4/30/2023	11	60	10.0		140		15		77		81		2	2		13		309	310	165.0	164.5
4/30/2023	12	60	10.0		142		13		85		85		4			13		309		166.0	
4/30/2023	13	60	10.1		141		11		76		85		2			13		309		164.8	
4/30/2023	14	60	10.2		138		3		73		95		2			13		309		165.0	
4/30/2023	15	60	10.1		144		13		97		87		1	2		15	14	309	309	164.2	165.0
4/30/2023	16	60	10.1		143		14		93		85		1			14		309		166.3	
4/30/2023	17	60	10.2		140		9		82		88		1			15		309		166.8	
4/30/2023	18	60	10.0		139		4		71		94		1			14		309		165.6	
4/30/2023	19	60	9.8		140		4		67		94		1	1		14		309	309	167.1	166.5
4/30/2023	20	60	9.9		139		5		67		93		2			13		309		167.2	
4/30/2023	21	60	10.0		139		8		72		88		2			12		309		164.0	
4/30/2023	22	60	9.7		136		8		77		89		2			12		309		165.4	
4/30/2023	23	60	9.7		136		16		97		84		3	2		11	13	309	309	165.8	165.6

Average:
Geometric Mean Average:

Limit:

140	9
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

89
≥ 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 4/30/23

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.
4/30/2023	0	60	11.7		138		8		64		87		1			13		310		165.9	
4/30/2023	1	60	11.7		138		2		43		95		1			12		310		166.8	
4/30/2023	2	60	11.8		142		5		50		90		1			13		310		166.7	
4/30/2023	3	60	11.9		139		10		58		83		1	1		13		310	310	166.5	166.5
4/30/2023	4	60	11.6		140		14		70		80		3			13		310		166.5	
4/30/2023	5	60	11.8		140		9		61		84		2			13		310		167.1	
4/30/2023	6	60	11.8		140		8		53		85		1			13		310		166.2	
4/30/2023	7	60	11.7		140		6		44		87		1	2		14	13	310	310	166.1	166.5
4/30/2023	8	60	11.8		140		3		39		93		2			12		310		165.9	
4/30/2023	9	60	11.7		141		4		43		91		2			13		310		166.7	
4/30/2023	10	60	11.5		139		5		50		89		3			13		310		166.1	
4/30/2023	11	60	11.6		138		6		45		87		2	2		13		310	310	167.1	166.5
4/30/2023	12	60	11.8		141		12		58		80		2			13		310		166.4	
4/30/2023	13	60	11.8		139		12		58		78		2			13		310		166.2	
4/30/2023	14	60	11.7		139		13		59		78		2			13		310		167.0	
4/30/2023	15	60	11.8		140		8		63		88		1	2		14	13	310	310	166.2	166.5
4/30/2023	16	60	11.7		138		4		48		92		2			13		310		166.5	
4/30/2023	17	60	11.3		141		0		37		99		1			12		310		166.2	
4/30/2023	18	60	11.2		140		0		38		99		2			14		310		166.5	
4/30/2023	19	60	11.1		140		1		33		98		1	1		13		310	310	167.2	166.6
4/30/2023	20	60	11.2		139		2		36		94		1			13		310		166.3	
4/30/2023	21	60	11.2		140		2		34		95		1			14		310		165.6	
4/30/2023	22	60	11.0		140		5		45		89		1			14		310		166.6	
4/30/2023	23	60	11.1		139		7		48		86		1	1		12	13	310	310	166.1	166.1

Average:
Geometric Mean Average:

Limit:

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

OR

91
≥ 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 30-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	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	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 30-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	0	0	1	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	1	0	0	0
2	1	1	1	1	1	1	1	1	1	1	1
3	1	1	1	1	1	1	0	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	1
7	0	0	1	0	1	1	1	1	1	1	0
8	1	1	0	0	1	1	1	1	1	1	0
9	0	0	0	0	0	1	1	1	1	1	0
10	1	1	1	1	1	1	1	1	1	1	1
11	1	1	1	1	1	0	1	1	1	0	0
12	1	1	1	1	1	1	1	1	1	1	1
13	1	1	0	1	1	1	1	1	1	1	0
14	1	1	0	1	1	1	1	1	1	1	0
15	1	1	1	1	1	1	1	1	0	1	0
16	0	0	1	0	1	1	1	0	1	1	0
17	1	1	1	1	0	1	1	1	1	1	0
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