



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



Date 5/22/23

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.
5/22/2023	0	60	10.2		136		1		45		97		3			13		309		158.9	
5/22/2023	1	60	9.9		138		5		52		90		2			13		309		166.4	
5/22/2023	2	60	9.7		135		6		58		90		2			13		309		168.6	
5/22/2023	3	60	9.9		134		7		57		88		2	2		13		309	309	166.2	165.0
5/22/2023	4	60	9.9		134		9		61		85		3			13		309		164.8	
5/22/2023	5	60	9.9		140		9		58		85		3			13		310		165.5	
5/22/2023	6	60	10.1		136		10		41		76		3			13		309		163.3	
5/22/2023	7	60	10.0		139		16		62		74		4	3		13	13	309	309	165.1	164.7
5/22/2023	8	60	10.0		139		17		58		71		5			14		309		167.5	
5/22/2023	9	60	10.0		139		22		63		65		6			13		310		166.8	
5/22/2023	10	60	10.0		140		16		66		76		4			13		309		168.8	
5/22/2023	11	60	10.2		138		10		50		80		4	5		13		309	309	164.1	166.8
5/22/2023	12	60	9.9		137		0		34		100		4			13		310		167.0	
5/22/2023	13	60	10.0		141		2		40		96		4			13		309		167.1	
5/22/2023	14	60	9.9		135		0		30		99		4			13		309		164.6	
5/22/2023	15	60	9.6		121		0		44		100		4	4		13	13	310	309	165.9	166.2
5/22/2023	16	60	9.8		123		0		29		100		3			14		309		165.9	
5/22/2023	17	60	9.7		134		0		37		100		4			14		310		166.7	
5/22/2023	18	60	10.1		138		5		57		92		3			13		309		165.2	
5/22/2023	19	60	10.1		137		6		58		90		3	3		13		309	309	167.3	166.3
5/22/2023	20	60	10.1		139		2		37		95		2			13		309		166.9	
5/22/2023	21	60	10.2		133		1		37		98		2			13		309		166.2	
5/22/2023	22	60	9.6		132		1		46		98		4			13		310		164.7	
5/22/2023	23	60	9.7		133		17		82		79		3	3		13	13	309	309	167.3	166.3

Average: Geometric Mean Average:	135	2	OR	95	see above	see above	see above	see above
Limit:	≤ 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	≤ 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 5/22/23

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.
5/22/2023	0	60	10.9		141		12		23		46		5			15		310		166.6	
5/22/2023	1	60	10.8		139		9		17		45		5			15		310		167.2	
5/22/2023	2	60	10.8		140		13		25		49		4			15		310		167.6	
5/22/2023	3	60	10.8		138		5		20		77		5	5		15		310	310	167.0	167.1
5/22/2023	4	60	10.7		146		13		36		62		4			13		310		166.1	
5/22/2023	5	60	10.8		139		4		17		75		4			13		310		166.4	
5/22/2023	6	60	11.0		143		2		15		90		4			12		310		165.9	
5/22/2023	7	60	10.8		138		1		10		86		4	4		12	14	310	310	167.1	166.4
5/22/2023	8	60	10.8		141		1		10		87		4			12		310		166.3	
5/22/2023	9	60	10.9		141		1		12		91		6			12		310		163.8	
5/22/2023	10	60	11.1		139		1		14		93		4			13		310		166.5	
5/22/2023	11	60	11.3		137		1		13		93		4	4		12		310	310	166.4	165.8
5/22/2023	12	60	11.4		140		0		10		96		3			13		310		166.5	
5/22/2023	13	60	11.4		142		0		9		98		3			13		310		166.1	
5/22/2023	14	60	11.2		141		0		6		95		2			13		311		165.4	
5/22/2023	15	60	11.0		139		2		13		81		4	3		13	13	310	310	167.3	166.3
5/22/2023	16	60	11.2		140		0		3		99		3			13		310		165.3	
5/22/2023	17	60	10.8		142		0		6		100		3			14		310		166.9	
5/22/2023	18	60	10.9		136		1		12		95		3			13		310		166.4	
5/22/2023	19	60	11.2		142		0		8		98		3	3		14		310	310	166.4	166.2
5/22/2023	20	60	11.3		140		0		9		98		4			14		310		167.1	
5/22/2023	21	60	11.3		136		2		12		85		3			14		310		166.5	
5/22/2023	22	60	11.0		146		5		16		72		4			11		311		166.0	
5/22/2023	23	60	11.1		137		18		41		57		4	3		14	13	310	310	165.3	166.2

Average:
Geometric Mean Average:

Limit:

140	1
≤ 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 22-May-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 22-May-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	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	IBC	5	IBC	1	1	1	1	1	1	2
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