



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



Date 4/16/23

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.
4/16/2023	0	60	10.4		139		19		81		76		2			15		309		167.3	
4/16/2023	1	60	10.4		141		19		62		69		1			14		309		166.0	
4/16/2023	2	60	10.4		142		22		75		71		1			13		310		166.4	
4/16/2023	3	60	10.3		143		19		70		72		2	1		14		309	309	166.4	166.5
4/16/2023	4	60	10.2		141		20		56		63		3			14		309		166.6	
4/16/2023	5	60	10.2		141		19		64		70		2			15		310		166.9	
4/16/2023	6	60	10.3		139		20		75		74		2			14		309		166.5	
4/16/2023	7	60	10.3		142		17		78		78		2	2		14	14	309	309	166.1	166.5
4/16/2023	8	60	10.3		143		21		73		71		1			13		309		166.9	
4/16/2023	9	60	10.3		139		21		77		73		2			13		309		166.9	
4/16/2023	10	60	10.4		141		19		75		75		2			13		310		165.5	
4/16/2023	11	60	10.4		140		20		62		68		2	2		13		309	309	167.3	166.7
4/16/2023	12	60	10.3		142		17		63		73		2			13		310		166.4	
4/16/2023	13	60	10.1		141		18		73		75		2			13		310		167.8	
4/16/2023	14	60	10.2		140		21		71		71		2			15		309		166.4	
4/16/2023	15	60	10.3		139		19		73		73		2	2		15	14	309	309	165.2	166.4
4/16/2023	16	60	10.3		138		15		67		78		2			15		309		167.0	
4/16/2023	17	60	10.7		145		19		68		72		1			15		309		165.8	
4/16/2023	18	60	10.5		139		20		72		72		2			15		310		167.0	
4/16/2023	19	60	10.5		142		16		81		81		2	2		15		309	309	167.3	166.8
4/16/2023	20	60	10.3		140		7		82		91		2			15		310		164.6	
4/16/2023	21	60	10.2		143		0		61		99		2			15		309		167.0	
4/16/2023	22	60	10.5		145		15		104		85		3			15		309		167.1	
4/16/2023	23	60	10.5		134		15		100		85		3	3		15	15	309	309	165.4	166.1

Average:
Geometric Mean Average:

Limit:

141	15
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

79
≥ 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

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 4/16/23

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.
4/16/2023	0	60	11.0		139		10		7		0		1			13		310		166.2	
4/16/2023	1	60	10.8		141		9		7		0		1			13		310		168.6	
4/16/2023	2	60	10.8		139		12		10		0		0			13		310		166.7	
4/16/2023	3	60	11.0		139		15		10		0		1	1		13		310	310	167.3	167.2
4/16/2023	4	60	10.9		143		15		11		0		2			13		310		166.8	
4/16/2023	5	60	10.8		141		20		15		0		1			13		310		168.0	
4/16/2023	6	60	10.9		139		22		13		0		2			12		310		166.1	
4/16/2023	7	60	11.0		140		16		18		9		2	2		13	13	310	310	165.8	166.7
4/16/2023	8	60	11.1		140		12		19		36		1			13		310		166.9	
4/16/2023	9	60	11.1		139		20		30		35		1			14		310		167.2	
4/16/2023	10	60	11.1		139		19		32		42		2			14		310		165.5	
4/16/2023	11	60	10.8		139		14		33		57		2	2		14		309	310	167.6	166.8
4/16/2023	12	60	11.1		140		13		27		52		3			14		310		166.8	
4/16/2023	13	60	11.1		140		16		36		57		2			14		310		166.6	
4/16/2023	14	60	11.1		141		21		35		39		2			14		310		167.0	
4/16/2023	15	60	11.0		139		23		49		54		2	2		14	14	310	310	166.8	166.8
4/16/2023	16	60	11.2		141		21		42		50		2			14		310		166.0	
4/16/2023	17	60	11.2		138		25		62		60		3			14		310		166.5	
4/16/2023	18	60	11.2		139		17		34		49		2			13		310		167.1	
4/16/2023	19	60	11.5		141		16		30		49		2	2		14		310	310	166.9	166.6
4/16/2023	20	60	11.5		139		16		40		60		3			14		310		166.2	
4/16/2023	21	60	11.5		138		17		50		66		7			14		310		167.3	
4/16/2023	22	60	11.5		140		9		29		69		4			14		310		167.3	
4/16/2023	23	60	11.5		140		4		20		78		2	4		13	14	310	310	165.9	166.7

Average:
Geometric Mean Average:

Limit:

140	15	36
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean	≥ 75% 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 16-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 16-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	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	3	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