



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



Date 12/16/23

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.
12/16/2023	0	60	10.7		140		11		70		84		0			15		310		166.1	
12/16/2023	1	60	10.5		140		7		62		88		1			13		310		165.9	
12/16/2023	2	60	10.8		144		5		54		90		0			12		309		167.5	
12/16/2023	3	60	10.7		139		11		73		85		1	1		14		310	310	166.9	166.6
12/16/2023	4	60	10.6		143		12		97		88		0			13		309		165.9	
12/16/2023	5	60	10.5		141		21		115		82		0			13		309		167.7	
12/16/2023	6	60	10.5		141		17		96		83		0			13		310		169.2	
12/16/2023	7	60	10.5		140		8		57		85		1	1		13	13	309	309	166.7	167.4
12/16/2023	8	60	10.3		142		5		47		89		1			13		310		164.7	
12/16/2023	9	60	10.8		141		11		62		82		0			10		309		169.4	
12/16/2023	10	60	10.9		138		13		62		79		0			13		309		167.2	
12/16/2023	11	60	10.9		142		10		58		82		0	0		11		310	309	166.4	166.9
12/16/2023	12	60	10.8		142		13		57		78		0			13		309		167.0	
12/16/2023	13	60	10.8		139		13		56		78		0			14		309		168.9	
12/16/2023	14	60	10.7		142		11		60		81		0			12		310		167.6	
12/16/2023	15	60	10.9		141		16		84		81		0	0		11	12	309	309	166.5	167.5
12/16/2023	16	60	10.7		140		13		69		81		0			15		309		166.7	
12/16/2023	17	60	10.8		143		14		66		78		0			15		309		165.9	
12/16/2023	18	60	10.8		142		16		80		81		0			16		309		165.5	
12/16/2023	19	60	10.7		140		17		83		79		0	0		16		309	309	167.9	166.5
12/16/2023	20	60	10.6		140		14		55		75		0			14		309		166.1	
12/16/2023	21	60	10.5		143		14		63		78		0			14		309		168.1	
12/16/2023	22	60	10.5		141		15		63		76		0			13		309		166.9	
12/16/2023	23	60	10.6		140		14		54		75		0	0		12	14	310	309	167.0	167.0

Average:
Geometric Mean Average:

Limit:

141	12
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

82
≥ 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 12/16/23

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.
12/16/2023	0	60	10.0		140		0		56		100		4			15		310		167.9	
12/16/2023	1	60	10.1		139		0		45		100		5			16		310		167.6	
12/16/2023	2	60	10.1		140		1		66		99		4			14		310		167.8	
12/16/2023	3	60	10.1		139		0		58		99		5	5		13		310	310	167.5	167.7
12/16/2023	4	60	10.1		143		0		54		100		6			13		310		167.4	
12/16/2023	5	60	10.1		140		1		69		98		5			13		310		167.1	
12/16/2023	6	60	10.1		140		11		91		88		4			14		310		168.3	
12/16/2023	7	60	10.0		141		1		56		98		4	5		13	14	310	310	166.4	167.3
12/16/2023	8	60	10.3		136		5		63		92		3			14		310		167.5	
12/16/2023	9	60	10.1		141		29		69		58		3			15		310		168.0	
12/16/2023	10	60	10.3		140		13		56		77		3			14		310		167.4	
12/16/2023	11	60	10.2		140		2		50		96		4	3		15		310	310	167.8	167.7
12/16/2023	12	60	10.2		139		1		51		98		3			13		310		167.0	
12/16/2023	13	60	10.1		138		4		64		93		2			13		310		168.0	
12/16/2023	14	60	10.1		139		3		58		95		3			14		310		167.8	
12/16/2023	15	60	10.2		142		2		54		96		3	3		15	14	310	310	166.6	167.4
12/16/2023	16	60	10.0		140		13		83		85		3			14		310		166.7	
12/16/2023	17	60	10.0		141		6		67		91		4			14		310		167.7	
12/16/2023	18	60	10.1		139		1		47		97		3			14		310		166.4	
12/16/2023	19	60	9.9		139		2		53		96		4	4		14		310	310	168.6	167.4
12/16/2023	20	60	10.1		142		8		65		88		3			14		310		168.3	
12/16/2023	21	60	10.0		138		9		71		87		3			13		310		167.5	
12/16/2023	22	60	10.1		140		14		72		80		3			13		310		167.4	
12/16/2023	23	60	10.2		140		10		64		85		3	3		13	14	310	310	166.9	167.5

Average:
Geometric Mean Average:

Limit:

140	2
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

96
≥ 80% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 16-Dec-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	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	0	IC	5	IC	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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 16-Dec-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	2	1	2	1	1	1	1	1	1	1
1	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2
3	2	2	2	2	2	2	2	2	2	2	2
4	2	2	2	2	2	2	2	2	2	2	2
5	2	2	2	2	2	2	2	2	2	2	2
6	0	IBC	6	IBC	2	2	2	2	2	2	2
7	2	2	2	2	2	2	2	2	2	2	2
8	2	2	2	2	2	2	2	2	2	2	2
9	2	2	2	2	2	2	2	2	2	2	2
10	2	2	2	2	2	2	2	2	2	2	2
11	2	2	2	2	2	2	2	2	2	2	2
12	2	2	2	2	2	2	2	2	2	2	2
13	2	2	2	2	2	2	2	2	2	2	2
14	2	2	2	2	2	2	2	2	2	2	2
15	1	1	1	1	1	1	1	1	1	1	1
16	1	2	1	1	1	2	1	2	1	2	1
17	2	2	2	2	2	2	2	1	1	2	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	2	1	2	2	2	1
21	1	1	1	1	2	2	2	2	2	2	1
22	2	2	2	1	2	2	2	2	2	2	1
23	2	2	2	2	2	2	2	2	2	2	2

Status Flags

I - Invalid C - Calibration F - Offline T - Out of Control ^ - Startup
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown