



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



Date 10/24/22

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.
10/24/2022	0	60	10.8		196		24		101		76		4			13		309		167.3	
10/24/2022	1	60	10.9		197		23		85		73		4			14		310		166.6	
10/24/2022	2	60	10.9		194		23		75		70		5			13		309		164.8	
10/24/2022	3	60	9.9		193		16		74		78		3	4		13		308	309	165.2	166.0
10/24/2022	4	60	9.9		191		8		80		90		3			13		309		164.1	
10/24/2022	5	60	10.0		197		12		66		81		3			12		310		163.6	
10/24/2022	6	60	10.1		192		10		47		80		4			12		310		163.9	
10/24/2022	7	60	10.1		196		16		63		75		3	3		12	13	309	309	165.1	164.2
10/24/2022	8	60	10.0		194		14		62		78		3			13		309		163.8	
10/24/2022	9	60	10.4		198		7		41		82		5			13		310		160.4	
10/24/2022	10	60	10.5		198		4		31		87		5			13		310		164.8	
10/24/2022	11	60	10.3		198		8		44		83		6	5		13		309	310	165.8	163.7
10/24/2022	12	60	10.2		198		6		41		84		6			13		309		166.7	
10/24/2022	13	60	10.2		195		8		69		89		6			13		309		163.8	
10/24/2022	14	60	10.0		159		1		70		99		7			14		310		163.4	
10/24/2022	15	60	10.0		186		3		45		93		7	7		13	13	309	309	164.5	164.6
10/24/2022	16	60	10.2		195		4		39		89		6			13		310		164.1	
10/24/2022	17	60	10.8		189		4		37		89		5			14		308		165.5	
10/24/2022	18	60	11.0		199		10		50		80		5			14		310		163.9	
10/24/2022	19	60	10.7		199		12		53		78		5	5		14		310	309	167.7	165.3
10/24/2022	20	60	10.9		198		8		43		81		5			14		309		167.5	
10/24/2022	21	60	11.0		200		18		64		73		4			13		310		166.0	
10/24/2022	22	60	11.0		194		11		58		80		5			14		309		162.8	
10/24/2022	23	60	10.7		192		3		48		93		5	5		14	14	309	309	166.5	165.7

Average:
Geometric Mean Average:

Limit:

194	8
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

85
≥ 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 10/24/22

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.
10/24/2022	0	60	10.8		191		21		78		73		2			14		310		165.7	
10/24/2022	1	60	10.8		187		19		66		72		3			14		310		164.7	
10/24/2022	2	60	10.5		188		17		62		73		1			14		310		164.9	
10/24/2022	3	60	10.5		190		18		58		69		1	2		14		310	310	165.9	165.3
10/24/2022	4	60	10.4		184		14		51		73		2			14		310		165.6	
10/24/2022	5	60	10.3		193		15		45		66		1			13		310		165.3	
10/24/2022	6	60	10.7		179		12		32		62		2			14		310		163.5	
10/24/2022	7	60	10.4		194		13		43		70		2	2		14	13	310	310	162.8	164.3
10/24/2022	8	60	10.5		198		9		30		70		3			14		310		162.9	
10/24/2022	9	60	10.6		188		22		82		73		3			13		310		165.7	
10/24/2022	10	60	11.4		197		16		46		65		5			14		310		165.0	
10/24/2022	11	60	10.7		195		15		43		66		3	4		14		310	310	164.7	164.6
10/24/2022	12	60	11.4		196		11		37		71		5			14		310		165.8	
10/24/2022	13	60	10.5		195		17		69		75		3			14		310		165.9	
10/24/2022	14	60	10.9		195		17		49		67		0			14		310		165.6	
10/24/2022	15	60	10.2		189		9		36		74		6	4		14	14	310	310	164.8	165.5
10/24/2022	16	60	10.2		197		9		35		75		4			14		310		165.3	
10/24/2022	17	60	10.2		197		8		33		76		4			14		310		166.0	
10/24/2022	18	60	10.2		195		10		39		76		4			14		310		165.8	
10/24/2022	19	60	10.4		194		12		44		72		4	4		14		309	310	164.9	165.5
10/24/2022	20	60	10.4		197		17		49		65		3			14		310		165.4	
10/24/2022	21	60	10.5		194		21		72		70		3			14		310		164.9	
10/24/2022	22	60	10.4		196		17		66		74		4			14		310		165.3	
10/24/2022	23	60	10.5		198		20		75		73		3	3		14	14	310	310	165.3	165.2

Average: Geometric Mean Average:	193	14	OR	71	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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 24-Oct-2022

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	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	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 24-Oct-2022

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	2	2	1	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	1	1	1	1
6	2	IBC	5	IBC	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