



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



Date 10/28/22

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.
10/28/2022	0	60	10.5		193		6		43		86		6			13		309		166.1	
10/28/2022	1	60	10.6		198		14		50		71		5			14		310		166.0	
10/28/2022	2	60	10.7		197		16		53		70		5			14		310		164.8	
10/28/2022	3	60	10.6		200		10		50		80		5	5		13		309	309	166.3	165.8
10/28/2022	4	60	10.5		196		5		39		88		5			13		309		167.3	
10/28/2022	5	60	10.6		198		9		62		86		6			14		310		166.3	
10/28/2022	6	60	10.6		199		12		54		77		6			13		309		167.5	
10/28/2022	7	60	10.8		197		5		34		86		7	6		12	13	310	309	165.5	166.7
10/28/2022	8	60	10.7		195		5		40		88		7			12		310		166.8	
10/28/2022	9	60	10.8		196		1		37		96		7			12		309		167.5	
10/28/2022	10	60	10.6		200		9		63		86		6			13		309		167.2	
10/28/2022	11	60	10.6		199		5		46		89		6	6		13		310	309	168.2	167.4
10/28/2022	12	60	10.9		194		3		65		95		6			13		308		166.8	
10/28/2022	13	60	10.6		200		3		58		95		7			13		310		168.0	
10/28/2022	14	60	10.8		198		2		45		95		6			13		309		164.5	
10/28/2022	15	60	10.4		199		1		58		98		7	7		13	13	309	309	165.7	166.2
10/28/2022	16	60	10.6		198		5		78		94		7			13		309		165.0	
10/28/2022	17	60	10.7		195		6		78		93		6			13		309		163.5	
10/28/2022	18	60	10.6		199		4		70		95		7			13		309		165.6	
10/28/2022	19	60	10.9		198		3		68		96		6	7		13		309	309	164.8	164.7
10/28/2022	20	60	10.7		199		4		71		95		6			13		310		165.9	
10/28/2022	21	60	10.9		197		4		74		94		6			13		309		163.6	
10/28/2022	22	60	10.8		197		7		84		92		6			13		310		164.8	
10/28/2022	23	60	10.6		198		4		70		94		6	6		13	13	310	310	166.4	165.2

Average:
Geometric Mean Average:

Limit:

198	5
≤ 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

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 10/28/22

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.
10/28/2022	0	60	10.5		197		15		51		71		3			14		310		165.5	
10/28/2022	1	60	10.6		195		13		45		70		3			14		310		166.2	
10/28/2022	2	60	10.6		194		14		46		70		3			14		310		166.6	
10/28/2022	3	60	10.6		194		15		53		72		3	3		14		310	310	167.3	166.4
10/28/2022	4	60	10.7		196		11		48		78		3			14		310		167.0	
10/28/2022	5	60	10.7		194		20		87		77		2			13		310		167.8	
10/28/2022	6	60	10.7		196		17		64		73		2			13		310		166.6	
10/28/2022	7	60	10.7		194		8		37		78		2	2		12	13	310	310	167.2	167.2
10/28/2022	8	60	10.9		187		6		32		83		4			12		310		167.5	
10/28/2022	9	60	10.9		188		4		33		89		3			12		310		167.4	
10/28/2022	10	60	10.8		196		5		41		88		4			13		310		168.1	
10/28/2022	11	60	10.9		192		6		43		86		1	3		13		310	310	167.7	167.7
10/28/2022	12	60	10.9		186		6		69		92		3			13		310		166.7	
10/28/2022	13	60	10.4		197		5		63		92		2			13		310		166.8	
10/28/2022	14	60	10.7		195		6		58		89		2			13		310		165.8	
10/28/2022	15	60	10.5		196		3		41		92		2	2		13	13	310	310	165.5	166.2
10/28/2022	16	60	10.6		196		8		87		91		2			13		310		165.3	
10/28/2022	17	60	10.6		194		8		84		91		2			14		310		166.2	
10/28/2022	18	60	10.5		192		5		62		92		2			13		310		165.1	
10/28/2022	19	60	10.7		190		5		73		93		1	2		13		310	310	165.2	165.5
10/28/2022	20	60	10.7		190		8		84		91		2			13		310		166.3	
10/28/2022	21	60	10.9		191		6		72		92		1			13		310		164.9	
10/28/2022	22	60	10.8		194		9		94		90		2			13		310		166.0	
10/28/2022	23	60	10.8		194		7		79		91		2	2		13	13	310	310	165.0	165.5

Average: Geometric Mean Average:	193	8	OR	87	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 28-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 28-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	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	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	2	1	2	2	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	2	1	1

Status Flags

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