



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



Date 11/25/22

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.
11/25/2022	0	60	10.7		196		19		63		69		5			13		310		166.4	
11/25/2022	1	60	10.8		199		17		69		75		5			13		310		166.5	
11/25/2022	2	60	10.7		198		18		49		65		5			13		309		166.8	
11/25/2022	3	60	10.8		199		20		58		66		6	5		13		310	309	164.9	166.1
11/25/2022	4	60	10.9		199		8		28		72		5			13		309		166.2	
11/25/2022	5	60	10.7		198		6		23		74		6			13		309		168.0	
11/25/2022	6	60	10.9		198		9		33		71		7			13		310		164.5	
11/25/2022	7	60	11.0		191		6		26		78		8	6		13	13	310	309	163.4	165.5
11/25/2022	8	60	11.0		194		5		28		83		7			13		309		166.9	
11/25/2022	9	60	11.0		191		3		33		91		8			13		309		166.3	
11/25/2022	10	60	11.1		197		14		53		73		7			14		309		166.4	
11/25/2022	11	60	11.2		198		21		60		66		5	7		14		309	309	168.0	166.9
11/25/2022	12	60	10.9		197		20		83		75		5			14		309		167.0	
11/25/2022	13	60	10.6		199		6		44		86		9			13		310		164.6	
11/25/2022	14	60	10.7		201		7		44		83		7			13		309		165.4	
11/25/2022	15	60	10.8		197		15		57		73		7	7		13	14	310	309	165.9	165.7
11/25/2022	16	60	10.6		196		9		42		79		7			13		309		166.0	
11/25/2022	17	60	10.5		195		6		36		84		7			13		310		166.5	
11/25/2022	18	60	10.6		201		10		49		79		7			14		310		166.3	
11/25/2022	19	60	10.6		197		26		116		78		7	7		13		310	309	166.0	166.2
11/25/2022	20	60	10.6		199		18		72		76		7			13		309		165.6	
11/25/2022	21	60	10.7		200		17		68		75		6			14		310		165.7	
11/25/2022	22	60	10.9		198		15		61		76		7			13		309		165.6	
11/25/2022	23	60	10.7		199		13		66		81		6	7		13	13	309	309	165.4	165.6

Average: Geometric Mean Average:	197	11	OR	77	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 11/25/22

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
11/25/2022	0	60	10.8		195		19		56		66		4		14		310		166.3	
11/25/2022	1	60	10.9		192		21		58		64		3		14		310		166.0	
11/25/2022	2	60	10.8		195		23		52		56		4		14		310		167.6	
11/25/2022	3	60	11.0		194		17		35		51		4	4	14		310	310	165.5	166.3
11/25/2022	4	60	11.1		171		13		29		56		3		14		310		166.5	
11/25/2022	5	60	10.9		188		12		31		62		2		14		310		167.3	
11/25/2022	6	60	10.9		190		13		28		55		2		14		310		165.1	
11/25/2022	7	60	11.0		189		10		34		70		2	3	14	14	310	310	165.0	166.0
11/25/2022	8	60	10.9		188		8		40		81		2		14		310		167.0	
11/25/2022	9	60	10.8		190		5		40		86		3		14		310		166.4	
11/25/2022	10	60	10.9		191		9		53		83		3		14		310		165.8	
11/25/2022	11	60	10.8		185		14		60		76		2	3	14		310	310	166.5	166.4
11/25/2022	12	60	10.5		187		10		56		83		3		14		310		166.5	
11/25/2022	13	60	10.6		185		8		44		83		3		14		310		165.9	
11/25/2022	14	60	10.6		193		8		50		84		3		14		310		166.4	
11/25/2022	15	60	10.6		192		12		48		76		4	3	13	14	310	310	165.8	166.2
11/25/2022	16	60	10.6		195		12		53		78		3		14		310		166.4	
11/25/2022	17	60	10.4		193		17		68		75		3		14		310		166.4	
11/25/2022	18	60	10.4		190		7		35		81		3		14		310		166.8	
11/25/2022	19	60	10.4		194		8		45		83		3	3	14		310	310	166.3	166.5
11/25/2022	20	60	10.4		194		28		120		76		2		13		310		166.5	
11/25/2022	21	60	10.7		195		20		77		74		3		14		310		166.4	
11/25/2022	22	60	10.6		196		11		53		80		2		14		310		166.7	
11/25/2022	23	60	10.6		193		6		37		85		2	2	13	14	310	310	166.6	166.6

Average: Geometric Mean Average:	191	12	OR	75	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 25-Nov-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	2	2	3	2	3	2	2	2	2	2	2
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	2	IC	6	IC	2	2	2	2	2	2	3
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	3	2	2	2	2	2	2	2
15	2	2	2	2	2	2	2	2	2	2	2
16	2	2	2	2	2	2	2	3	3	2	2
17	2	3	3	3	3	2	3	2	2	2	2
18	2	2	2	2	2	2	2	2	2	2	2
19	3	2	2	2	2	3	3	3	2	3	2
20	2	2	3	2	2	2	2	2	2	2	2
21	2	2	2	2	2	3	2	2	2	3	2
22	2	2	2	2	2	2	2	2	2	2	2
23	2	2	2	3	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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 25-Nov-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	2	2	2	2	2	2	2	2	2	2	2
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	1	1	1	2	2	2	1	1
5	2	2	2	2	2	2	2	2	2	2	2
6	2	IBC	6	IBC	2	2	2	2	2	2	2
7	2	2	2	2	2	2	1	1	1	2	2
8	1	1	2	2	2	2	2	2	2	2	1
9	2	2	2	2	2	2	2	2	1	2	2
10	2	1	2	1	2	2	2	2	2	2	1
11	2	1	1	2	2	2	2	2	1	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	2	2	2	2	2	2	2	2	2	2	2
16	2	2	2	2	2	2	2	2	2	2	2
17	1	2	2	2	2	2	2	1	2	2	2
18	2	1	2	2	2	2	2	2	2	2	2
19	2	2	2	2	2	2	2	2	2	2	2
20	2	2	2	2	2	2	2	2	2	2	2
21	2	2	2	2	2	2	2	2	2	2	2
22	2	2	2	2	2	2	2	2	2	2	2
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