



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



Date 5/28/22

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.
5/28/2022	0	60	9.9		190		5		55		91		3			13		304		168.3	
5/28/2022	1	60	10.1		186		6		61		89		3			13		304		165.8	
5/28/2022	2	60	10.0		192		21		92		77		2			14		304		168.2	
5/28/2022	3	60	10.2		193		25		91		72		3	3		13		304	304	167.8	167.5
5/28/2022	4	60	9.8		190		19		90		79		3			13		304		169.8	
5/28/2022	5	60	10.5		195		21		74		71		3			13		305		167.1	
5/28/2022	6	60	10.3		190		10		62		83		3			13		304		167.3	
5/28/2022	7	60	10.4		180		6		58		90		4	3		13	13	304	304	167.5	167.9
5/28/2022	8	60	10.4		180		6		58		90		4			14		304		166.2	
5/28/2022	9	60	10.3		190		11		66		83		4			13		304		166.9	
5/28/2022	10	60	10.4		194		13		70		81		4			14		304		166.8	
5/28/2022	11	60	10.2		196		20		83		75		4	4		14		304	304	168.1	167.0
5/28/2022	12	60	10.3		197		20		79		75		4			14		304		166.2	
5/28/2022	13	60	10.3		197		12		65		81		4			14		305		167.9	
5/28/2022	14	60	10.4		198		16		71		78		4			13		304		168.0	
5/28/2022	15	60	10.5		197		18		75		76		4	4		14	14	304	304	166.1	167.0
5/28/2022	16	60	10.3		193		11		61		82		4			14		304		167.1	
5/28/2022	17	60	10.5		195		17		73		76		3			14		304		166.0	
5/28/2022	18	60	10.4		200		23		72		69		3			13		304		168.4	
5/28/2022	19	60	10.4		197		15		66		78		3	3		13		305	304	165.2	166.7
5/28/2022	20	60	10.6		200		23		85		73		3			14		305		163.6	
5/28/2022	21	60	10.5		192		22		77		72		3			13		304		166.4	
5/28/2022	22	60	10.7		197		18		69		75		3			13		304		164.1	
5/28/2022	23	60	10.6		198		24		72		67		3	3		13	13	304	304	166.4	165.1

Average: Geometric Mean Average:	193	14	OR	80	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 5/28/22

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.
5/28/2022	0	60	10.1		197		1		29		96		1			16		310		166.4	
5/28/2022	1	60	10.1		197		1		36		96		1			15		310		166.7	
5/28/2022	2	60	10.0		196		5		72		94		1			15		310		167.8	
5/28/2022	3	60	10.1		196		3		61		95		0	1		15		310	310	168.0	167.2
5/28/2022	4	60	10.1		197		4		65		95		2			15		310		168.5	
5/28/2022	5	60	10.2		197		3		61		94		1			15		310		168.2	
5/28/2022	6	60	10.3		197		4		55		94		1			15		310		167.6	
5/28/2022	7	60	10.2		197		3		52		94		3	2		15	15	310	310	166.9	167.8
5/28/2022	8	60	10.0		199		2		44		96		1			15		310		170.5	
5/28/2022	9	60	10.2		192		3		46		94		1			15		310		166.1	
5/28/2022	10	60	10.2		197		4		49		91		1			15		310		168.4	
5/28/2022	11	60	10.3		187		3		41		93		2	1		15		310	310	167.1	168.0
5/28/2022	12	60	10.2		197		4		51		91		0			15		310		168.0	
5/28/2022	13	60	9.8		196		9		69		87		1			15		310		170.0	
5/28/2022	14	60	10.3		192		4		44		92		1			15		310		162.9	
5/28/2022	15	60	10.3		192		4		46		92		1	1		15	15	310	310	163.2	166.0
5/28/2022	16	60	9.6		197		4		46		92		1			15		310		173.0	
5/28/2022	17	60	10.1		194		6		50		87		1			14		310		172.2	
5/28/2022	18	60	10.4		195		3		39		93		1			14		310		162.3	
5/28/2022	19	60	10.1		195		3		45		94		1	1		15		310	310	164.1	167.9
5/28/2022	20	60	9.8		196		12		71		83		2			14		310		170.6	
5/28/2022	21	60	10.2		191		8		56		86		1			14		310		164.9	
5/28/2022	22	60	10.5		197		11		60		82		1			14		310		165.1	
5/28/2022	23	60	10.3		199		20		80		75		1	1		14	14	310	310	171.4	168.0

Average: Geometric Mean Average:	195	4	OR	92	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-May-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	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	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	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	2	2	2	2	2	2	2	2	2	2	2
18	2	2	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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 28-May-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	0	0	0	1	0	1	0	0	0	1	0
1	0	0	1	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	2	IBC	5	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	1	0	0	0	1	0
10	0	0	0	0	0	0	0	0	0	0	0
11	1	1	0	0	0	0	0	1	1	0	0
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	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