



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



Date 3/20/22

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.
3/20/2022	0	60	9.7		182		11		62		83		4			13		304		166.4	
3/20/2022	1	60	9.8		186		15		66		78		4			13		304		169.3	
3/20/2022	2	60	9.8		189		13		64		79		5			13		304		166.8	
3/20/2022	3	60	9.9		186		21		90		77		4	4		13		304	304	164.8	166.8
3/20/2022	4	60	9.8		187		20		87		77		4			14		304		165.4	
3/20/2022	5	60	9.8		191		17		71		76		4			13		304		167.4	
3/20/2022	6	60	9.6		180		19		58		67		4			14		305		165.9	
3/20/2022	7	60	9.8		187		22		60		64		5	4		14	13	304	304	166.9	166.4
3/20/2022	8	60	9.7		182		14		61		77		4			14		304		168.5	
3/20/2022	9	60	9.9		186		19		66		71		5			13		305		166.4	
3/20/2022	10	60	9.8		192		22		58		62		4			12		304		166.9	
3/20/2022	11	60	9.9		193		22		74		71		5	5		13		304	304	165.1	166.7
3/20/2022	12	60	10.0		184		23		80		71		4			14		305		164.2	
3/20/2022	13	60	9.9		188		22		87		75		4			13		304		166.3	
3/20/2022	14	60	9.9		188		20		82		76		4			14		304		167.5	
3/20/2022	15	60	10.1		185		24		94		75		4	4		13	13	305	304	165.2	165.8
3/20/2022	16	60	10.2		184		22		80		72		4			13		304		163.4	
3/20/2022	17	60	10.1		178		19		74		74		4			14		304		162.8	
3/20/2022	18	60	10.2		193		21		61		65		3			14		304		165.4	
3/20/2022	19	60	10.3		194		17		56		70		4	4		14		304	304	166.5	164.5
3/20/2022	20	60	10.0		191		15		51		70		4			14		304		164.8	
3/20/2022	21	60	10.0		194		25		82		69		3			13		305		166.7	
3/20/2022	22	60	10.0		193		26		86		70		4			14		304		165.9	
3/20/2022	23	60	10.0		192		22		74		71		4	4		15	14	304	304	164.3	165.4

Average:
Geometric Mean Average:

Limit:

188	19
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

73
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≤ 12 8-HR. Block Average

lb/hr

see above
≤ 345 4-HR Block Average

°F

see above
≤ 173 4-HR Block Average

klb/hr

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 3/20/22

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.
3/20/2022	0	60	9.3		189		5		45		89		2			15		319		166.4	
3/20/2022	1	60	9.5		195		7		42		84		2			14		314		165.5	
3/20/2022	2	60	9.4		194		9		43		79		1			14		310		164.8	
3/20/2022	3	60	9.3		195		9		43		78		2	2		14		309	313	164.1	165.2
3/20/2022	4	60	9.3		194		3		35		93		2			14		301		165.3	
3/20/2022	5	60	9.2		194		2		41		94		1			14		295		165.8	
3/20/2022	6	60	9.2		195		3		34		91		1			14		299		165.7	
3/20/2022	7	60	9.2		194		8		48		84		1	1		15	14	299	299	166.3	165.8
3/20/2022	8	60	9.4		193		11		52		80		1			14		300		164.5	
3/20/2022	9	60	9.1		195		8		44		82		1			15		306		165.8	
3/20/2022	10	60	9.1		196		4		34		87		1			14		301		165.1	
3/20/2022	11	60	9.0		192		16		54		71		1	1		15		306	303	166.7	165.5
3/20/2022	12	60	9.2		195		20		56		65		1			14		307		164.4	
3/20/2022	13	60	9.1		196		14		57		75		1			14		301		165.1	
3/20/2022	14	60	9.1		197		15		51		70		1			14		300		165.2	
3/20/2022	15	60	9.0		192		18		53		67		1	1		14	14	304	303	166.7	165.3
3/20/2022	16	60	9.1		193		15		61		75		1			14		301		165.8	
3/20/2022	17	60	9.1		194		12		45		73		1			14		305		166.0	
3/20/2022	18	60	8.9		186		13		43		69		1			14		308		168.0	
3/20/2022	19	60	9.3		192		7		24		72		1	1		14		306	305	163.6	165.9
3/20/2022	20	60	9.3		189		10		31		69		0			14		307		165.3	
3/20/2022	21	60	9.3		196		17		46		62		2			14		304		163.1	
3/20/2022	22	60	9.2		192		30		155		80		2			14		298		164.6	
3/20/2022	23	60	9.3		190		22		105		79		1	1		14	14	312	305	165.7	164.7

Average:
Geometric Mean Average:

Limit:

193	10
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

80
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average ppmc

see above
≤ 12 8-HR. Block Average lb/hr

see above
≤ 345 4-HR Block Average °F

see above
≤ 173 4-HR Block Average klb/hr

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 20-Mar-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	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	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	1	2	1	2	2	1	2	2	1
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 20-Mar-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	2	2	2	2	2	2	2	2
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	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