



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



Date 1/28/22

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.
1/28/2022	0	60	10.4		197		9		57		83		17			13		299		163.6	
1/28/2022	1	60	10.3		199		45		138		68		19			14		299		164.6	
1/28/2022	2	60	10.3		197		28		102		72		16			14		299		163.3	
1/28/2022	3	60	10.5		197		20		74		73		17	17		14		299	299	163.8	163.8
1/28/2022	4	60	10.2		199		20		90		78		18			14		299		163.4	
1/28/2022	5	60	10.3		198		17		55		68		15			14		299		162.9	
1/28/2022	6	60	10.1		198		18		62		71		15			14		299		167.3	
1/28/2022	7	60	9.8		200		5		45		89	IBM	18	16		14	14	299	299	165.5	164.8
1/28/2022	8	60	9.9		197		8		62	IBM	87	IBM	14			15		299		167.4	
1/28/2022	9	60	10.5		196		9		53		83		13			15		299		167.5	
1/28/2022	10	60	10.4		195		16		82		81		15			14		299		164.3	
1/28/2022	11	60	10.5		196		14		66		78		16	14		14		299	299	164.5	165.9
1/28/2022	12	60	10.5		194		16		77		79		16			14		299		163.6	
1/28/2022	13	60	10.3		199		12		69		83		15			14		300		163.6	
1/28/2022	14	60	10.4		197		18		91		80		16			14		299		163.3	
1/28/2022	15	60	10.3		200		22		104		79		15	15		14	14	299	299	164.9	163.9
1/28/2022	16	60	10.2		198		45		200		77		17			14		299		165.3	
1/28/2022	17	60	10.2		197		12		64		82		17			14		299		166.3	
1/28/2022	18	60	10.6		199		24		96		75		14			14		299		162.4	
1/28/2022	19	60	10.5		198		16		80		81		16	16		15	81	299	299	163.0	164.3
1/28/2022	20	60	10.4		196		23		102		78		15			14		299		163.5	
1/28/2022	21	60	10.4		200		22		99		78		14			14		299		164.6	
1/28/2022	22	60	10.3		197		18		94		80		14			14		299		165.1	
1/28/2022	23	60	10.3		195		22		115		81		15	14		14	14	299	299	165.7	164.7

Average:
Geometric Mean Average:

Limit:

197	17
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

79
≥ 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 1/28/22

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.
1/28/2022	0	60	8.6		187		2		23		93		2			13		310		165.4	
1/28/2022	1	60	8.6		184		3		27		89		2			13		310		165.8	
1/28/2022	2	60	8.6		181		6		32		82		2			14		310		165.9	
1/28/2022	3	60	8.7		176		7		38		81		2	2		14		308	309	165.9	165.7
1/28/2022	4	60	8.7		163		8		39		80		2			14		310		165.4	
1/28/2022	5	60	8.7		177		7		27		73		2			14		310		166.0	
1/28/2022	6	60	8.9		159		7		22		67		13			13		310		165.4	
1/28/2022	7	60	8.5		176		0		13	IBM	97	IBM	4	5		13	14	310	310	166.2	165.7
1/28/2022	8	60	8.9		157		5		27		83		3			13		310		165.9	
1/28/2022	9	60	9.1		166		3		28		91		2			13		310		166.1	
1/28/2022	10	60	9.0		159		1		25		97		3			13		310		165.6	
1/28/2022	11	60	8.8		161		3		32		90		3	3		14		310	310	165.4	165.8
1/28/2022	12	60	8.6		166		8		43		81		3			14		310		166.2	
1/28/2022	13	60	8.4		176		6		35		84		3			14		310		166.2	
1/28/2022	14	60	8.4		171		6		29		81		3			14		310		165.8	
1/28/2022	15	60	8.8		170		20		49		59		2	3		14	14	310	310	165.6	166.0
1/28/2022	16	60	8.7		178		21		80		73		2			14		309		165.5	
1/28/2022	17	60	9.7		181		10		26		63		6			14		311		166.7	
1/28/2022	18	60	9.7		184		15		37		60		7			14		310		165.6	
1/28/2022	19	60	9.3		185		18		47		61		5	5		14		310	310	165.7	165.9
1/28/2022	20	60	9.4		181		17		41		60		3			14		309		165.0	
1/28/2022	21	60	8.8		189		23		76		69		2			13		310		165.4	
1/28/2022	22	60	8.8		181		21		56		63		2			13		310		165.6	
1/28/2022	23	60	8.7		187		19		53		64		2	2		14	14	310	310	166.6	165.7

Average:
Geometric Mean Average:

Limit:

175	7
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

81
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average ppmc

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

see above
≤ 345 °F 4-HR Block Average

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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 28-Jan-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	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	2	1	1	1	2	1
4	1	2	1	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	1	1	1	1
6	2	IC	6	IC	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	2	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

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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-Jan-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