



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



Date 2/25/22

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.
2/25/2022	0	60	10.0		195		7		18		62		6			15		309		166.1	
2/25/2022	1	60	9.9		192		13		35		63		6			15		309		167.6	
2/25/2022	2	60	10.0		196		18		37		52		6			15		309		166.9	
2/25/2022	3	60	10.1		196		20		45		55		6	6		16		309	309	166.2	166.7
2/25/2022	4	60	10.2		197		20		41		51		6			15		309		165.2	
2/25/2022	5	60	10.2		200		15		19		19		5			15		309		165.1	
2/25/2022	6	60	10.2		198		14		22		36		6			15		310		165.1	
2/25/2022	7	60	10.0		199		12		20		40		6	6		15	15	309	309	165.8	165.3
2/25/2022	8	60	10.1		195		19		58		67		5			14		309		166.1	
2/25/2022	9	60	10.0		199		14		46		69		5			15		309		164.5	
2/25/2022	10	60	10.0		199		14		39		64		5			15		309		164.8	
2/25/2022	11	60	10.0		197		14		32		55		5	5		15		309	309	164.9	165.1
2/25/2022	12	60	9.9		198		16		35		54		4			15		310		165.9	
2/25/2022	13	60	9.9		199		15		34		57		5			15		309		166.3	
2/25/2022	14	60	9.9		199		25		70		65		5			16		309		166.6	
2/25/2022	15	60	10.1		198		27		76		64		5	5		16	15	309	309	165.6	166.1
2/25/2022	16	60	10.0		195		25		77		67		5			14		309		165.2	
2/25/2022	17	60	10.1		198		21		53		61		5			16		309		164.1	
2/25/2022	18	60	10.1		199		16		39		58		4			15		310		166.3	
2/25/2022	19	60	10.1		197		18		47		61		4	5		15		309	309	165.6	165.3
2/25/2022	20	60	10.0		200		22		49		55		5			15		309		165.1	
2/25/2022	21	60	10.1		196		20		41		51		4			15		309		165.5	
2/25/2022	22	60	10.0		198		23		69		67		4			15		309		166.0	
2/25/2022	23	60	9.9		198		22		51		56		5	4		15	15	309	309	166.7	165.8

Average:
Geometric Mean Average:

Limit:

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

OR

57
≥ 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



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Date 2/25/22

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	1 Hr Avg.
2/25/2022	0	60	9.3		182		10		30		65		1			17		309		166.8	
2/25/2022	1	60	9.4		180		8		28		72		2			15		307		165.2	
2/25/2022	2	60	9.2		182		17		25		31		1			16		310		167.2	
2/25/2022	3	60	9.4		179		12		21		44		1	2		16		304	308	166.6	166.4
2/25/2022	4	60	9.5		182		14		23		41		1			16		310		165.6	
2/25/2022	5	60	9.5		180		13		33		60		1			16		304		166.6	
2/25/2022	6	60	9.4		184		9		33		73		2			16		303		166.6	
2/25/2022	7	60	9.5		188		9		28		68		2	2		16	16	308	306	166.0	166.2
2/25/2022	8	60	9.5		183		17		64		73		1			16		309		166.1	
2/25/2022	9	60	9.4		181		5		42		87		1			16		307		165.4	
2/25/2022	10	60	9.3		182		16		62		73		1			16		309		167.1	
2/25/2022	11	60	9.3		174		17		52		67		2	1		16		308	308	166.6	166.3
2/25/2022	12	60	9.4		172		19		62		70		1			16		309		165.7	
2/25/2022	13	60	9.3		187		18		53		65		2			16		303		167.0	
2/25/2022	14	60	9.4		184		27		90		70		3			16		312		166.2	
2/25/2022	15	60	9.4		179		24		92		74		3	2		16	16	307	308	166.6	166.4
2/25/2022	16	60	9.5		177		23		107		78		3			16		305		166.5	
2/25/2022	17	60	9.3		173		16		69		77		2			16		295		167.6	
2/25/2022	18	60	9.5		176		15		60		74		2			16		300		165.5	
2/25/2022	19	60	9.5		173		18		58		69		2	2		16		302	301	167.1	166.7
2/25/2022	20	60	9.3		175		24		80		70		1			15		306		166.9	
2/25/2022	21	60	9.4		166		25		46		45		1			16		305		167.0	
2/25/2022	22	60	9.7		180		35		74		53		1			16		311		162.3	
2/25/2022	23	60	9.3		181		33		80		59		2	1		16	16	311	308	164.5	165.2

Average:
Geometric Mean Average:

Limit:

179	16
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

67
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 25-Feb-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	1	2	1
3	2	2	2	2	2	2	2	2	2	2	2
4	1	2	1	2	2	1	2	2	1	1	1
5	2	2	2	1	2	1	2	1	1	1	1
6	2	IC	6	IC	2	2	2	2	1	2	2
7	1	2	2	2	2	2	2	2	2	2	2
8	2	2	1	2	1	1	2	2	2	1	1
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	1	1	1	1	1	1	2	1	1
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	1	2	1	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	1	1	2	2	2	2	1	2	1
20	2	1	2	2	1	2	1	2	2	2	1
21	1	2	2	1	2	1	2	2	1	1	1
22	2	1	2	2	2	2	2	2	2	2	1
23	2	2	1	2	2	2	2	2	2	2	1

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 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 25-Feb-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

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 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown