



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



Date 2/13/22

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.
2/13/2022	0	60	9.8		192		6		21		73		5			13		309		163.6	
2/13/2022	1	60	9.6		196		12		29		59		5			13		310		165.9	
2/13/2022	2	60	9.7		197		14		35		61		5			13		309		167.0	
2/13/2022	3	60	9.6		185		7		33		78		73	22		13		309	309	162.0	164.6
2/13/2022	4	60	9.5		186		15		25		42		6			13		321		164.6	
2/13/2022	5	60	9.3		194		17		5		0		71			13		333		165.7	
2/13/2022	6	60	9.4		191		18		10		0		5			13		334		164.8	
2/13/2022	7	60	9.5		196		24		29		18		26	27		13	13	337	331	164.9	165.0
2/13/2022	8	60	9.5		195		24		38		38		28			13		338		164.8	
2/13/2022	9	60	9.5		195		21		30		28		4			13		333		163.7	
2/13/2022	10	60	9.5		196		24		32		27		4			13		336		164.7	
2/13/2022	11	60	9.5		197		23		33		30		4	10		13		337	336	166.4	164.9
2/13/2022	12	60	9.5		193		21		28		24		4			13		339		166.7	
2/13/2022	13	60	9.5		189		5		20		74		4			13		310		165.5	
2/13/2022	14	60	9.5		195		13		31		60		4			13		309		165.8	
2/13/2022	15	60	9.2		189		9		25		63		5	4		13	13	309	317	165.4	165.8
2/13/2022	16	60	9.5		195		14		28		50		5			13		310		167.7	
2/13/2022	17	60	9.6		196		18		50		63		5			13		309		164.8	
2/13/2022	18	60	9.5		194		17		39		56		6			13		309		164.6	
2/13/2022	19	60	9.5		197		15		32		53		4	5		13		309	309	167.2	166.1
2/13/2022	20	60	9.6		196		16		30		47		3			13		309		166.7	
2/13/2022	21	60	9.5		198		14		39		65		4			13		309		165.7	
2/13/2022	22	60	9.6		196		12		30		60		4			13		309		165.9	
2/13/2022	23	60	9.4		196		7		25		71		4	4		13	13	309	309	164.7	165.7

Average:
Geometric Mean Average:

Limit:

194	14
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

48
≥ 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



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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.
2/13/2022	0	60	9.2		194		15		47		67		1			13		310		166.7	
2/13/2022	1	60	9.1		191		15		42		64		1			13		310		166.1	
2/13/2022	2	60	9.2		195		11		35		69		1			13		310		166.1	
2/13/2022	3	60	9.2		193		16		39		60		2	I		13		310	310	166.7	166.4
2/13/2022	4	60	9.1		191		12		39		70		26			13		310		166.4	
2/13/2022	5	60	9.2		197		10		20		51		1			13		310		166.2	
2/13/2022	6	60	9.1		196		9		9		0		50			13		310		166.0	
2/13/2022	7	60	9.2		196		8		12		34		1	I		13	13	310	310	166.6	166.3
2/13/2022	8	60	9.1		194		13		17		24		1			13		309		166.6	
2/13/2022	9	60	9.3		195		18		21		16		1			13		310		166.8	
2/13/2022	10	60	9.3		194		21		29		29		1			13		310		166.1	
2/13/2022	11	60	9.3		189		12		19		34		1	I		13		309	310	166.3	166.5
2/13/2022	12	60	9.3		187		12		19		34		1			13		310		166.5	
2/13/2022	13	60	9.2		195		10		26		60		0			13		310		166.2	
2/13/2022	14	60	9.2		195		11		22		50		1			13		309		166.6	
2/13/2022	15	60	9.1		196		15		28		44		1	I		13	13	310	310	166.8	166.5
2/13/2022	16	60	9.2		195		17		37		54		1			13		310		166.6	
2/13/2022	17	60	9.4		195		18		40		56		1			13		309		166.6	
2/13/2022	18	60	9.2		194		20		41		51		2			13		310		166.7	
2/13/2022	19	60	9.4		184		17		32		47		1	I		13		309	310	166.7	166.6
2/13/2022	20	60	9.3		177		14		35		60		1			13		310		167.3	
2/13/2022	21	60	9.3		195		20		62		67		1			13		310		166.6	
2/13/2022	22	60	9.4		192		11		41		72		1			13		310		166.9	
2/13/2022	23	60	9.3		195		9		31		72		1	I		13	13	310	310	166.8	166.9

Average:
Geometric Mean Average:

Limit:

193	13
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

53
≥ 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 13-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	1	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	1	1	1	1	1	1
4	1	1	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	1	1	1	1
12	1	1	2	1	1	1	2	1	2	1	1
13	1	1	2	2	1	2	1	2	1	2	1
14	2	1	1	1	1	1	2	1	1	1	1
15	1	1	1	2	2	1	1	1	1	1	1
16	1	1	2	1	1	1	1	1	1	1	1
17	1	1	1	1	1	1	1	1	2	1	1
18	1	2	1	1	1	2	2	2	2	2	1
19	1	1	1	1	1	1	1	1	1	1	1
20	1	1	1	2	2	2	2	2	2	2	1
21	2	2	2	1	1	1	1	1	2	1	1
22	1	1	2	1	1	1	1	1	2	1	1
23	1	2	2	2	1	2	2	1	1	2	1

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 13-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