



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



Date 2/5/22

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.
2/5/2022	0	60	9.6		194		11		19		43		7			14		299		165.6	
2/5/2022	1	60	9.9		191		8		17		52		6			14		299		164.4	
2/5/2022	2	60	9.9		189		7		20		66		7			14		300		164.4	
2/5/2022	3	60	9.9		195		11		21		48		6	6		14		299	299	165.5	164.9
2/5/2022	4	60	9.8		194		10		15		34		8			14		299		166.2	
2/5/2022	5	60	10.0		196		17		22		21		8			14		299		164.4	
2/5/2022	6	60	10.0		197		13		21		38		7			14		300		165.9	
2/5/2022	7	60	10.0		193		10		28		64		8	8		14	14	299	299	161.5	164.5
2/5/2022	8	60	10.1		196		9		24		64		8			14		299		162.9	
2/5/2022	9	60	10.1		197		13		36		64		8			14		300		163.8	
2/5/2022	10	60	9.9		199		6		22		70		9			14		299		164.0	
2/5/2022	11	60	9.8		199		13		18		28		11	9		14		299	299	165.4	164.0
2/5/2022	12	60	9.9		197		14		27		46		10			14		300		166.2	
2/5/2022	13	60	9.8		194		7		9		24		9			14		299		164.5	
2/5/2022	14	60	10.0		194		2		6		72		11			13		300		152.6	
2/5/2022	15	60	9.8		199		7		15		55		9	10		14	14	299	299	163.4	161.7
2/5/2022	16	60	9.7		195		4		9		62		9			14		299		165.2	
2/5/2022	17	60	10.0		191		6		13		52		9			14		299		163.0	
2/5/2022	18	60	10.1		196		18		17		0		9			14		300		166.7	
2/5/2022	19	60	10.3		194		18		9		0		8	9		14		299	299	165.8	165.2
2/5/2022	20	60	10.3		196		21		19		0		9			14		299		164.1	
2/5/2022	21	60	10.3		194		15		18		18		8			14		300		163.9	
2/5/2022	22	60	10.4		197		27		71		62		9			14		299		163.5	
2/5/2022	23	60	10.3		197		24		76		69		8	9		14	14	299	299	163.7	163.8

Average:
Geometric Mean Average:

Limit:

195	10
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

46
≥ 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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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.
2/5/2022	0	60	10.2		194		3		26		89		10			14		310		165.0	
2/5/2022	1	60	10.2		194		6		26		78		8			14		310		163.6	
2/5/2022	2	60	10.4		194		8		34		78		8			14		308		165.0	
2/5/2022	3	60	10.4		188		6		28		78		8	9		14		309	309	163.9	164.4
2/5/2022	4	60	9.9		196		6		30		80		7			14		310		164.2	
2/5/2022	5	60	10.0		195		8		21		63		6			14		310		164.2	
2/5/2022	6	60	10.0		188		12		20		40		4			14		310		164.7	
2/5/2022	7	60	9.7		194		8		22		66		5	6		14	14	310	310	164.1	164.3
2/5/2022	8	60	10.1		199		5		24		77		4			14		310		164.2	
2/5/2022	9	60	10.0		196		13		42		69		5			14		310		164.6	
2/5/2022	10	60	9.7		198		15		47		68		7			14		310		164.1	
2/5/2022	11	60	10.0		191		11		28		62		5	5		14		310	310	164.6	164.4
2/5/2022	12	60	10.1		185		7		17		61		3			14		310		165.2	
2/5/2022	13	60	10.0		197		2		13		86		6			14		310		161.6	
2/5/2022	14	60	10.1		197		4		20		80		5			14		310		159.7	
2/5/2022	15	60	10.1		198		8		33		76		5	5		14	14	310	310	162.3	162.2
2/5/2022	16	60	9.9		197		5		29		82		4			14		310		165.5	
2/5/2022	17	60	9.9		196		8		29		73		4			14		310		165.9	
2/5/2022	18	60	10.0		196		9		25		63		4			14		310		165.3	
2/5/2022	19	60	10.2		197		16		37		56		4	4		14		310	310	164.5	165.3
2/5/2022	20	60	10.1		196		15		45		67		3			14		310		166.0	
2/5/2022	21	60	10.2		194		11		33		68		3			14		310		165.5	
2/5/2022	22	60	10.3		195		33		107		69		4			14		310		165.1	
2/5/2022	23	60	10.2		194		31		105		71		4	3		14	14	310	310	165.7	165.6

Average:
Geometric Mean Average:

Limit:

194	8
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

72
≥ 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 05-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	2	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	2	2	2	1	1	2	2	1
4	2	2	2	1	1	1	1	1	1	1	1
5	1	1	1	2	2	2	2	1	2	2	1
6	2	IC	5	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	2	2	2	1	1	1	2	1
12	1	1	1	1	1	1	1	1	1	1	1
13	1	1	2	1	2	2	2	2	2	2	1
14	2	2	1	1	1	1	1	1	2	1	1
15	1	1	1	1	1	1	1	2	1	1	1
16	2	2	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 05-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