



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



Date 2/20/22

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.
2/20/2022	0	60	10.5		190		29		110		74		5			14		309		164.6	
2/20/2022	1	60	10.2		188		21		59		65		4			13		309		163.8	
2/20/2022	2	60	10.3		197		20		59		65		4			13		310		166.3	
2/20/2022	3	60	10.3		191		20		61		66		5	5		13		310	309	166.3	165.2
2/20/2022	4	60	10.3		191		19		54		65		6			13		309		164.7	
2/20/2022	5	60	10.1		198		18		46		61		5			14		310		166.1	
2/20/2022	6	60	10.1		193		18		56		68		6			14		309		166.7	
2/20/2022	7	60	10.2		186		13		39		67		6	5		14	14	309	309	166.7	166.1
2/20/2022	8	60	10.3		192		12		34		65		5			14		309		165.8	
2/20/2022	9	60	10.1		192		14		38		65		5			15		310		166.4	
2/20/2022	10	60	10.3		193		14		35		58		4			14		309		165.6	
2/20/2022	11	60	10.0		196		13		34		62		5	5		13		310	309	166.5	166.1
2/20/2022	12	60	10.1		193		12		34		67		4			14		310		165.1	
2/20/2022	13	60	10.1		200		8		15		50		5			13		309		165.7	
2/20/2022	14	60	9.9		194		8		17		52		5			13		309		167.0	
2/20/2022	15	60	10.0		195		11		31		64		5	5		14	14	310	309	165.7	165.9
2/20/2022	16	60	10.0		189		8		25		68		5			13		309		164.9	
2/20/2022	17	60	10.0		194		10		28		63		5			13		309		166.1	
2/20/2022	18	60	10.0		195		16		47		66		5			13		310		165.7	
2/20/2022	19	60	10.1		195		16		50		68		5	5		14		309	309	164.6	165.3
2/20/2022	20	60	10.0		193		12		39		68		5			13		310		165.9	
2/20/2022	21	60	10.1		195		9		30		71		4			13		309		166.1	
2/20/2022	22	60	10.0		189		7		25		72		4			13		309		166.1	
2/20/2022	23	60	10.0		194		5		17		71		4	4		14	14	309	309	166.6	166.1

Average:
Geometric Mean Average:

Limit:

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

OR

66
≥ 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

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 2/20/22

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.
2/20/2022	0	60	9.6		187		16		47		66		2			13		310		166.3	
2/20/2022	1	60	9.6		189		13		45		71		2			13		310		166.7	
2/20/2022	2	60	9.6		184		9		41		78		2			14		310		167.0	
2/20/2022	3	60	9.6		189		13		45		70		2	2		14		310	310	167.1	166.8
2/20/2022	4	60	9.6		177		8		46		82		3			13		310		166.4	
2/20/2022	5	60	9.6		184		16		74		78		2			13		310		166.5	
2/20/2022	6	60	9.6		185		8		42		82		3			14		310		166.4	
2/20/2022	7	60	9.7		185		5		39		88		2	2		13	13	310	310	166.8	166.5
2/20/2022	8	60	9.5		184		6		44		87		1			13		310		166.9	
2/20/2022	9	60	9.5		188		7		40		82		2			13		310		166.0	
2/20/2022	10	60	9.5		190		4		38		89		4			13		309		165.3	
2/20/2022	11	60	9.4		183		11		57		80		1	2		13		310	310	167.2	166.3
2/20/2022	12	60	9.3		181		11		57		81		1			13		310		167.2	
2/20/2022	13	60	9.5		191		9		47		80		1			13		309		166.5	
2/20/2022	14	60	9.3		196		8		38		80		2			13		310		166.8	
2/20/2022	15	60	9.3		187		4		32		88		1	2		13	13	310	310	166.7	166.8
2/20/2022	16	60	9.3		190		7		32		79		2			13		310		166.0	
2/20/2022	17	60	9.3		196		5		30		84		1			13		310		166.6	
2/20/2022	18	60	9.3		192		5		29		83		1			13		310		167.3	
2/20/2022	19	60	9.3		192		2		22		93		1	1		13		310	310	166.2	166.5
2/20/2022	20	60	9.2		186		3		21		87		1			13		310		165.9	
2/20/2022	21	60	9.2		192		3		24		88		1			13		310		167.0	
2/20/2022	22	60	9.2		187		3		28		90		1			13		310		166.0	
2/20/2022	23	60	9.1		192		6		33		82		1	1		13	13	310	310	167.1	166.5

Average:
Geometric Mean Average:

Limit:

188	6
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

83
≥ 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-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	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	2	2	1	2	1	1	2	2	2	1	1
4	2	2	2	2	2	2	2	2	2	2	2
5	2	2	2	1	1	1	1	1	1	1	1
6	2	IC	6	IC	1	1	1	1	1	1	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	1	2	2	2
10	2	1	1	1	1	1	2	1	1	1	1
11	1	1	1	1	2	2	1	1	2	2	1
12	2	2	2	2	2	2	2	2	2	2	2
13	2	2	1	2	2	2	2	2	2	2	1
14	2	2	1	1	1	1	2	1	1	1	1
15	1	2	1	1	1	1	1	1	2	1	1
16	1	1	1	1	1	2	1	1	1	2	1
17	1	2	1	2	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	2	1	1	1	2	1
20	1	1	1	1	1	1	1	1	1	1	1
21	2	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	2	1	1	1	1	1	1

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 20-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

I - Invalid C - Calibration F - Offline T - Out of Control ^ - Startup
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