



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



Date 2/26/22

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.
2/26/2022	0	60	10.0		192		19		55		66		6			14		309		164.1	
2/26/2022	1	60	10.1		198		20		55		63		4			13		309		165.7	
2/26/2022	2	60	9.9		199		22		68		67		5			14		309		166.8	
2/26/2022	3	60	10.0		198		22		62		64		5	5		13		310	309	166.0	165.6
2/26/2022	4	60	10.1		192		22		55		61		4			13		309		165.4	
2/26/2022	5	60	10.1		197		22		52		58		4			13		309		166.3	
2/26/2022	6	60	10.1		199		22		66		67		4			13		310		167.6	
2/26/2022	7	60	10.0		197		19		40		52		5	4		13	13	309	309	167.2	166.6
2/26/2022	8	60	10.0		197		23		33		29		6			13		309		168.7	
2/26/2022	9	60	10.2		199		19		62		69		5			13		309		167.2	
2/26/2022	10	60	10.2		198		21		54		61		6			13		309		164.7	
2/26/2022	11	60	10.2		197		18		45		60		5	5		13		309	309	165.8	166.6
2/26/2022	12	60	9.9		200		9		48		82		6			13		310		164.8	
2/26/2022	13	60	9.7		195		16		57		73		5			13		309		162.9	
2/26/2022	14	60	9.9		199		6		24		77		5			13		309		164.4	
2/26/2022	15	60	9.9		194		1		13		90		5	5		13	13	310	310	162.5	163.7
2/26/2022	16	60	9.4		188		1		16		96		5			13		309		162.4	
2/26/2022	17	60	9.4		189		1		15		96		4			13		309		163.0	
2/26/2022	18	60	10.2		196		10		38		73		5			13		309		163.1	
2/26/2022	19	60	10.0		199		17		50		66		5	5		13		310	309	165.9	163.6
2/26/2022	20	60	10.1		198		18		38		51		5			13		309		166.9	
2/26/2022	21	60	10.3		195		18		42		58		2			13		310		166.1	
2/26/2022	22	60	10.4		196		21		37		42		3			13		309		165.8	
2/26/2022	23	60	10.1		198		22		41		46		2	3		13	13	310	309	168.2	166.8

Average:
Geometric Mean Average:

Limit:

196	12
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

71
≥ 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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Date 2/26/22

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.
2/26/2022	0	60	9.4		191		31		80		61		2			15		311		166.6	
2/26/2022	1	60	9.3		188		31		79		61		2			15		304		166.8	
2/26/2022	2	60	9.3		188		14		53		74		1			15		304		166.7	
2/26/2022	3	60	9.3		190		15		48		70		1	1		14		301	305	166.1	166.6
2/26/2022	4	60	9.4		182		17		55		69		1			14		304		166.7	
2/26/2022	5	60	9.6		179		15		55		72		1			14		301		166.5	
2/26/2022	6	60	9.4		186		21		65		67		1			14		302		166.5	
2/26/2022	7	60	9.4		178		20		48		57		3	2		14	14	313	305	166.6	166.6
2/26/2022	8	60	9.5		188		11		32		66		4			14		317		162.7	
2/26/2022	9	60	9.5		185		8		47		83		3			14		304		165.6	
2/26/2022	10	60	9.4		183		4		45		92		4			14		301		165.5	
2/26/2022	11	60	9.2		185		6		49		88		3	3		14		305	307	165.7	164.9
2/26/2022	12	60	9.0		194		2		32		92		2			14		311		166.8	
2/26/2022	13	60	9.1		190		4		53		92		1			14		301		164.2	
2/26/2022	14	60	9.0		191		5		25		82		2			14		307		164.8	
2/26/2022	15	60	9.0		191		3		17		80		2	2		14	14	312	308	164.5	165.1
2/26/2022	16	60	8.2		185		1		19		92		0			14		306		166.8	
2/26/2022	17	60	8.5		192		0		21		98		0			14		292		164.2	
2/26/2022	18	60	9.0		190		2		40		94		2			14		295		162.9	
2/26/2022	19	60	9.0		180		8		57		87		3	1		14		307	300	166.5	165.1
2/26/2022	20	60	9.2		187		1		31		98		1			14		300		167.0	
2/26/2022	21	60	9.3		178		2		37		95		1			14		294		166.1	
2/26/2022	22	60	9.4		164		4		50		92		1			14		291		163.4	
2/26/2022	23	60	9.1		166		13		57		78		1	1		14	14	299	296	166.0	165.6

Average:
Geometric Mean Average:

Limit:

185	6
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

86
≥ 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 26-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	1	1	1	1	1	1	2	2	2	2	1
2	1	1	1	1	1	1	1	1	1	1	1
3	1	1	1	1	2	1	2	2	2	1	1
4	2	2	2	2	1	1	1	2	2	1	1
5	2	2	2	2	2	2	2	2	2	2	2
6	2	IC	6	IC	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	1	1	1	2	1
12	2	2	1	1	1	1	2	1	1	1	1
13	1	1	1	1	1	1	1	1	1	1	1
14	1	1	2	2	2	2	2	2	2	2	1
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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 26-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
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown