



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



Date 4/19/22

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.
4/19/2022	0	60	9.6		198		19		43		57		2			13		305		164.7	
4/19/2022	1	60	9.7		192		17		59		72		2			13		301		162.7	
4/19/2022	2	60	9.7		197		25		80		69		2			13		302		166.0	
4/19/2022	3	60	9.8		195		33		115		71		2	2		13		305	303	161.4	163.7
4/19/2022	4	60	9.6		194		24		74		68		2			13		311		165.2	
4/19/2022	5	60	9.7		196		24		73		67		2			13		303		163.0	
4/19/2022	6	60	9.5		197		25		66		62		3			13		305		164.9	
4/19/2022	7	60	9.4		198		17		40		58		3	2		13	13	311	307	164.8	164.5
4/19/2022	8	60	9.6		194		19		31		37		2			13		309		166.1	
4/19/2022	9	60	9.7		188		12		41		70		4			13		311		164.0	
4/19/2022	10	60	9.6		194		31		111		72		3			13		306		165.8	
4/19/2022	11	60	10.1		187		24		73		66		2	3		13		304	307	164.5	165.1
4/19/2022	12	57	9.9		194		24		48		51		2			13		308		163.9	
4/19/2022	13	60	9.8		194		44		143		69		5			13		312		161.7	
4/19/2022	14	57	10.1		188		41		137		70		4			14		314		165.0	
4/19/2022	15	60	9.8		193		20		71		72		2	3		13	13	303	309	165.4	164.0
4/19/2022	16	60	9.2		190		16		77		80		4			13		309		166.9	
4/19/2022	17	60	9.2		185		15		59		74		4			13		308		165.7	
4/19/2022	18	60	9.5		192		17		61		72		4			13		305		165.7	
4/19/2022	19	60	9.4		193		18		61		70		4	4		13		310	308	165.7	166.0
4/19/2022	20	60	9.2		182		10		38		73		4			13		305		165.2	
4/19/2022	21	60	9.2		179		8		33		77		4			13		308		167.7	
4/19/2022	22	60	9.4		179		12		37		67		3			13		306		167.1	
4/19/2022	23	60	9.4		180		16		39		60		3	4		13	13	307	307	165.5	166.4

Average:
Geometric Mean Average:

Limit:

191	20
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

68
≥ 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



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



Date 4/19/22

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.
4/19/2022	0	60	10.1		194		1		38		97		2			15		310		165.7	
4/19/2022	1	60	10.1		194		1		35		98		2			15		310		164.1	
4/19/2022	2	60	10.1		187		3		54		94		3			14		310		165.7	
4/19/2022	3	60	10.0		202		3		48		93		2	2		14		310	310	165.8	165.3
4/19/2022	4	60	9.9		205		1		33		97		5			14		310		165.5	
4/19/2022	5	60	10.3		181		12		66		82		3			14		310		164.6	
4/19/2022	6	60	10.0		184		3		38		93		4			13		310		165.0	
4/19/2022	7	60	10.1		197		1		30		96		4	4		13	14	310	310	166.1	165.3
4/19/2022	8	60	10.0		191		1		31		96		3			14		310		165.7	
4/19/2022	9	60	10.0		184		1		24		97		4			13		310		164.9	
4/19/2022	10	60	9.8		191		14		90		84		4			13		310		165.8	
4/19/2022	11	60	9.9		185		5		51		90		3	4		13		310	310	165.4	165.4
4/19/2022	12	60	9.7		201		1		32		97		4			13		310		165.7	
4/19/2022	13	60	9.8		186		10		64		85		4			14		310		165.5	
4/19/2022	14	59	9.7		197		2		43		96		4			14		310		165.8	
4/19/2022	15	60	10.0		187		14		73		81		1	3		14	14	310	310	165.3	165.6
4/19/2022	16	60	9.8		181		1		33		98		4			13		310		155.3	
4/19/2022	17	60	9.7		193		1		37		97		3			14		310		164.4	
4/19/2022	18	60	9.8		193		1		37		97		3			13		310		165.3	
4/19/2022	19	60	9.7		190		3		58		94		4	3		13		310	310	166.4	162.9
4/19/2022	20	60	9.8		194		1		26		95		4			14		310		164.4	
4/19/2022	21	60	9.8		193		2		27		94		3			14		310		165.8	
4/19/2022	22	60	9.9		194		1		44		98		3			14		310		166.0	
4/19/2022	23	60	9.9		184		0		42		100		4	3		13	14	310	310	165.3	165.4

Average:
Geometric Mean Average:

Limit:

191	2
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

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95
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see above
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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 19-Apr-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	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	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	2	2	2	2	2
12	2	2	2	I	2	2	I	2	2	2	2
13	2	2	2	2	2	2	2	2	2	2	2
14	2	2	2	I	2	2	I	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

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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 19-Apr-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	3	IBC	6	IBC	2	2	2	2	2	2	3
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	I	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