



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



Date 4/28/22

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.
4/28/2022	0	60	9.7		185		18		52		64		6			13		304		167.6	
4/28/2022	1	60	9.7		171		16		50		68		5			13		301		166.8	
4/28/2022	2	60	9.8		168		16		52		69		5			13		300		166.8	
4/28/2022	3	60	9.7		171		17		39		56		5	5		13		310	304	167.6	167.2
4/28/2022	4	60	9.7		171		22		42		47		6			13		310		165.5	
4/28/2022	5	60	9.8		184		30		76		60		5			14		314		168.7	
4/28/2022	6	60	9.8		186		10		24		57		5			13		306		166.9	
4/28/2022	7	60	9.7		192		17		26		33		5	5		13	13	310	310	168.9	167.5
4/28/2022	8	60	10.0		174		25		40		39		4			13		305		168.2	
4/28/2022	9	60	10.0		179		17		27		35		5			13		309		168.2	
4/28/2022	10	60	9.8		186		14		20		32		6			13		314		167.7	
4/28/2022	11	60	9.8		185		15		27		43		6	5		13		313	310	167.2	167.8
4/28/2022	12	60	9.7		174		15		30		50		7			13		311		167.6	
4/28/2022	13	60	9.4		184		8		14		44		7			13		316		168.4	
4/28/2022	14	60	9.6		186		7		17		61		6			13		311		167.2	
4/28/2022	15	60	9.7		176		14		20		31		6	7		13	13	309	312	168.6	168.0
4/28/2022	16	60	9.6		174		4		19		78		6			13		302		167.3	
4/28/2022	17	60	9.9		177		4		20		80		6			13		297		166.1	
4/28/2022	18	60	9.8		177		8		20		61		5			13		302		165.5	
4/28/2022	19	60	9.8		180		6		18		67		5	5		14		302	301	165.4	166.1
4/28/2022	20	60	9.6		180		17		21		22		5			13		309		169.5	
4/28/2022	21	60	9.8		176		15		16		9		5			13		312		168.6	
4/28/2022	22	60	9.9		177		14		17		21		5			13		312		168.3	
4/28/2022	23	60	9.8		177		20		30		32		4	5		13	13	306	310	166.8	168.3

Average:
Geometric Mean Average:

Limit:

179	13
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

52
≥ 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 4/28/22

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.
4/28/2022	0	60	9.9		190		18		77		77		7			14		310		168.4	
4/28/2022	1	60	9.7		192		4		70		94		6			14		310		167.2	
4/28/2022	2	60	9.8		196		5		80		94		5			13		310		167.7	
4/28/2022	3	60	9.7		194		0		60		99		6	6		11		310	310	167.7	167.8
4/28/2022	4	60	9.7		187		1		56		99		7			10		310		167.8	
4/28/2022	5	60	9.8		198		1		62		98		3			13		310		167.5	
4/28/2022	6	60	9.7		192		0		42		100		3			15		310		167.7	
4/28/2022	7	60	9.7		194		0		30		99		3	4		14	13	310	310	167.0	167.5
4/28/2022	8	60	9.9		187		1		51		99		4			13		310		168.2	
4/28/2022	9	60	9.9		194		1		38		98		5			14		310		166.4	
4/28/2022	10	60	9.4		194		1		32		98		5			14		310		167.6	
4/28/2022	11	60	9.6		184		0		43		100		5	5		14		310	310	167.6	167.5
4/28/2022	12	60	9.7		197		0		34		100		4			13		310		166.9	
4/28/2022	13	60	9.7		190		0		32		100		3			12		310		168.7	
4/28/2022	14	60	9.7		202		0		26		100		5			13		310		166.8	
4/28/2022	15	60	9.6		192		0		45		99		4	4		13	13	310	310	167.3	167.4
4/28/2022	16	60	9.5		187		0		28		100		4			14		310		167.5	
4/28/2022	17	60	9.6		195		0		38		100		3			14		310		167.9	
4/28/2022	18	60	9.7		199		0		31		100		4			13		310		168.0	
4/28/2022	19	60	9.6		193		0		28		99		4	4		13		310	310	168.4	168.0
4/28/2022	20	60	9.6		195		1		24		97		4			13		310		167.8	
4/28/2022	21	60	9.7		196		0		26		100		3			13		310		167.2	
4/28/2022	22	60	9.8		201		0		24		100		3			14		310		167.6	
4/28/2022	23	60	9.8		196		0		30		99		5	4		13	13	310	310	167.0	167.4

Average:
Geometric Mean Average:

Limit:

194	0
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

100
≥ 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

Status Flags

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 28-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	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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 28-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	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	2	IBC	4	IBC	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0

Status Flags

I - Invalid	C - Calibration	F - Offline	T - Out of Control	^ - Startup
B - Bad	M - Maintenance	P - Purge	E - Excluded	* - Shutdown