



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



Date 4/26/22

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.
4/26/2022	0	60	9.6		165		4		48		92		4			13		301		166.1	
4/26/2022	1	60	9.8		185		9		44		80		4			13		300		165.7	
4/26/2022	2	60	9.8		178		19		44		57		3			13		313		167.0	
4/26/2022	3	60	9.9		183		18		41		57		3	3		13		311	306	166.3	166.3
4/26/2022	4	60	10.0		165		17		38		56		3			13		307		167.0	
4/26/2022	5	60	9.7		174		23		34		33		4			13		315		169.2	
4/26/2022	6	60	9.7		179		15		22		33		5			14		317		166.7	
4/26/2022	7	60	9.7		170		9		14		35		5	4		13	13	316	314	167.4	167.6
4/26/2022	8	60	9.6		164		10		19		49		4			13		312		167.4	
4/26/2022	9	60	9.8		171		13		28		56		4			13		308		166.9	
4/26/2022	10	60	9.9		175		10		23	IBCM	59	IBCM	3			13		304		167.9	
4/26/2022	11	60	4.6	IBCM	78	IBCM	63	IBCM	22	IBCM	0	IBCM	247	IBCM	4	14		309	308	165.7	167.0
4/26/2022	12	60	9.8		176		22		27		19		4			14		318		167.9	
4/26/2022	13	60	9.7		183		16		23		32		5			14		316		165.7	
4/26/2022	14	60	9.9		183		21		26		22		5			14		317		166.5	
4/26/2022	15	60	9.9		179		18		26		31		5	5		13	13	314	316	167.8	167.0
4/26/2022	16	60	10.1		165		11		37		71		4			14		301		165.5	
4/26/2022	17	60	9.9		167		4		28		87		5			13		297		163.8	
4/26/2022	18	60	10.0		183		22		48		53		5			13		314		166.1	
4/26/2022	19	60	10.0		182		30		88		66		5	5		13		314	307	168.5	166.0
4/26/2022	20	60	10.1		178		19		46		58		5			14		311		165.2	
4/26/2022	21	60	9.7		181		21		49		58		4			13		314		168.5	
4/26/2022	22	60	9.8		187		21		39		46		5			13		318		166.9	
4/26/2022	23	60	9.8		181		23		56		58		5	5		14	13	319	315	167.5	167.0

Average:  
Geometric Mean Average:

Limit:

176	14
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

58
≥ 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 4/26/22

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.
4/26/2022	0	60	10.5		199		1		31		97		4			13		310		163.5	
4/26/2022	1	60	9.8		195		0		46		99		3			14		310		166.9	
4/26/2022	2	60	9.9		186		1		37		98		3			14		310		167.6	
4/26/2022	3	60	9.9		195		1		31		97		4	3		14		310	310	167.2	166.3
4/26/2022	4	60	10.0		189		0		35		100		7			14		310		167.0	
4/26/2022	5	60	9.9		194		0		38		100		3			14		310		167.9	
4/26/2022	6	60	9.9		199		1		40		97		3			14		310		167.1	
4/26/2022	7	60	9.8		192		1		32		98		4	4		14	14	310	310	167.7	167.4
4/26/2022	8	60	9.7		194		1		27		97		2			14		309		167.7	
4/26/2022	9	60	9.7		196		1		28		95		4			14		310		166.8	
4/26/2022	10	60	9.7		196		1		24	IBCM	95	IBCM	4			14		310		168.4	
4/26/2022	11	60	4.2	IBCM	78	IBCM	62	IBCM	21	IBCM	0	IBCM	252	IBCM	3			310	310	167.1	167.5
4/26/2022	12	60	9.6		194		0		22		100		15			14		310		167.9	
4/26/2022	13	60	9.6		205		1		30		98		4			14		310		168.3	
4/26/2022	14	60	9.5		194		0		26		99		3			13		310		167.7	
4/26/2022	15	60	9.6		188		0		27		100		3	6		13	14	310	310	167.9	167.9
4/26/2022	16	60	9.7		188		1		36		98		2			13		310		168.4	
4/26/2022	17	60	9.5		194		0		29		98		4			14		310		166.8	
4/26/2022	18	60	9.7		194		0		34		99		4			14		310		167.5	
4/26/2022	19	60	9.9		191		1		45		98		3	3		13		310	310	167.1	167.4
4/26/2022	20	60	9.7		190		0		43		99		4			13		310		167.6	
4/26/2022	21	60	9.7		187		1		68		99		3			14		310		167.7	
4/26/2022	22	60	9.9		196		0		61		100		3			15		310		167.2	
4/26/2022	23	60	9.6		199		0		42		100		2	3		14	14	310	310	167.2	167.4

Average:  
Geometric Mean Average:

Limit:

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

OR

99
≥ 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-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	IM	22	IM	6	IM	18	IM	7	IM	22	IM	7
12	7	IM	18	IM	6	IM	18	IM	2	IM	22	IM	2	IM	18	IM	11
13	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
14	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
16	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
18	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
19	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
21	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
22	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
23	2	2	2	2	2	2	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-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	2	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	IM	15	4
10	17	BM	9	BM	17	BM	8	BM	17	BM	13
11	3	BM	22	BM	0	IM	0	BM	0	BM	3
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

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 B - Bad                          M - Maintenance                      P - Purge                          E - Excluded                          \* - Shutdown