



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



Date 10/20/22

Wheel Plant Wheelabrator North Andover  
Unit 1 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 Hr Block
10/20/2022	0	0	20.9	IF	24	IF	10	IF	0	IBF	0	IBF	0	IF		0		67		0.0		
10/20/2022	1	0	20.9	IF	24	IF	11	IF	0	IBF	0	IBF	0	IF		2		65		0.0		
10/20/2022	2	0	20.9	IF	24	IF	12	IF	0	IBF	0	IBF	0	IF		1		64		0.0		
10/20/2022	3	5	20.1	ICF	22	ICF	12	ICF	0	IBF	0	IBCF	1	ICF	0	0		62	65	0.0	0.0	
10/20/2022	4	12	17.3	IBCF	148	IBCF	74	IBCF	0	IBF	0	IBCF	554	IBCF		0		62		0.0		
10/20/2022	5	0	20.9	IF	27	IF	11	IF	123	IBCF	91	IBCF	0	IF		0		61		0.0		
10/20/2022	6	0	20.9	IF	26	IF	11	IF	0	IBF	0	IBF	0	IF		0		60		0.0		
10/20/2022	7	0	20.9	IF	27	IF	11	IF	0	IBF	0	IBF	0	IF	139	IBCF	1	1	60	61	0.0	0.0
10/20/2022	8	0	20.9	IF	28	IF	11	IF	0	IBF	0	IBF	0	IF		0		61		0.0		
10/20/2022	9	0	20.9	IF	29	IF	12	IF	0	IBF	0	IBF	0	IF		0		61		0.0		
10/20/2022	10	0	20.9	IF	31	IF	11	IF	0	IBF	0	IBF	0	IF		1		63		0.0		
10/20/2022	11	0	20.9	IF	33	IF	11	IF	0	IBF	0	IBF	0	IF	0	0		67	63	0.0	0.0	
10/20/2022	12	0	20.9	IF	37	IF	10	IF	0	IBF	0	IBF	0	IF		0		80		0.0		
10/20/2022	13	0	20.9	IF	31	IF	10	IF	0	IBF	0	IBF	0	IF		0		79		0.0		
10/20/2022	14	0	20.9	IF	28	IF	10	IF	0	IBF	0	IBF	0	IF		0		75		0.0		
10/20/2022	15	0	20.9	IF	26	IF	11	IF	0	IBF	0	IBF	0	IF	0	0	0	73	77	0.0	0.0	
10/20/2022	16	0	20.9	IF	26	IF	10	IF	1	IBF	0	IBF	0	IF		0		71		0.0		
10/20/2022	17	0	20.9	IF	26	IF	10	IF	0	IBF	0	IBF	0	IF		0		69		0.0		
10/20/2022	18	0	20.9	IF	26	IF	10	IF	0	IBF	0	IBF	0	IF		0		67		0.0		
10/20/2022	19	0	20.9	IF	26	IF	10	IF	0	IBF	0	IBF	0	IF	0	0		66	68	0.0	0.0	
10/20/2022	20	0	20.9	IF	26	IF	10	IF	0	IBF	0	IBF	0	IF		0		64		0.0		
10/20/2022	21	0	20.9	IF	27	IF	10	IF	0	IBF	0	IBF	0	IF		0		63		0.0		
10/20/2022	22	0	20.9	IF	27	IF	10	IF	0	IBF	0	IBF	0	IF		0		62		0.0		
10/20/2022	23	0	20.9	IF	27	IF	10	IF	0	IBF	0	IBF	0	IF	0	0	0	61	63	0.0	0.0	

Average:  
Geometric Mean Average:

Limit:

32	IBCF
11	IBCF
≤ 205	≤ 29
24-HR Block Avg.	24-HR Geometric Mean

OR

0	IBCF
≥ 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**

- 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 10/20/22

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.
10/20/2022	0	60	10.8		197		24		79		70		3			14		310		164.6	
10/20/2022	1	60	11.1		198		25		72		65		3			10		310		164.8	
10/20/2022	2	60	11.0		197		25		77		67		2			16		310		166.2	
10/20/2022	3	60	10.9		197		24		74		68		1	3		12		310	310	166.7	165.6
10/20/2022	4	60	10.9		198		25		65		62		4			10		310		165.6	
10/20/2022	5	60	11.0		197		24		70		65		4			14		310		165.9	
10/20/2022	6	60	11.3		198		20		47		57		5			14		310		162.7	
10/20/2022	7	60	11.3		198		26		57		54		5	5		11	13	310	310	166.3	165.1
10/20/2022	8	60	11.5		197		30		77		61		12			14		310		166.9	
10/20/2022	9	60	11.5		198		68		165		59		10			13		310		165.4	
10/20/2022	10	60	11.3		199		27		95		71		9			11		310		165.0	
10/20/2022	11	60	11.5		197		27		94		72		6	9		17		310	310	164.8	165.5
10/20/2022	12	60	11.2		196		20		60		66		7			17		310		165.9	
10/20/2022	13	60	11.4		192		19		64		70		5			16		310		165.3	
10/20/2022	14	60	11.3		198		20		63		69		6			16		310		165.2	
10/20/2022	15	60	11.8		195		21		48		57		4	5		16	15	310	310	166.7	165.8
10/20/2022	16	60	11.2		198		14		41		66		7			15		310		165.3	
10/20/2022	17	60	11.1		197		17		51		67		6			15		310		165.2	
10/20/2022	18	60	11.2		198		18		50		65		6			16		310		164.6	
10/20/2022	19	60	11.2		197		29		110		73		8	6		14		310	310	163.2	164.6
10/20/2022	20	60	11.3		197		18		57		69		6			15		310		165.1	
10/20/2022	21	60	11.4		197		20		62		68		6			14		310		165.5	
10/20/2022	22	60	11.3		198		22		81		72		5			14		310		166.0	
10/20/2022	23	60	11.4		198		18		45		60		5	5		15	15	310	310	165.3	165.5

Average:  
Geometric Mean Average:

Limit:

197	23
≤ 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

°F

see above
≤ 173 4-HR Block Average

klb/hr

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- \* - Shutdown



# WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



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

**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 20-Oct-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	1	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	1	1	1	1	1	1	1	1	1	1	1
4	1	1	1	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	1	1	1	1
6	2	IBC	5	IBC	1	1	1	1	1	1	1
7	1	1	1	1	1	1	1	1	1	1	1
8	1	1	1	1	1	1	1	1	1	1	1
9	1	1	1	1	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	1	1	1	1
11	1	1	1	1	1	1	1	1	1	1	1
12	1	1	1	1	1	1	1	1	1	1	1
13	1	1	1	1	1	1	1	1	1	1	1
14	1	1	1	1	1	1	1	1	1	1	1
15	1	1	1	1	1	1	1	1	1	1	1
16	1	1	1	1	1	1	1	1	1	1	1
17	1	1	1	1	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	1	1	1	1	1	1
20	1	1	1	1	1	1	1	1	1	1	1
21	1	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	1	1	1	1	1	1	1

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