



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



Date 1/18/22

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
1/18/2022	0	0	20.9	IF	28	IF	8	IF	46	IBF	82	IBF	0	IF			0		592		0.0	
1/18/2022	1	0	20.9	IF	24	IF	8	IF	40	IBF	79	IBF	0	IF			0		592		0.0	
1/18/2022	2	0	20.9	IF	22	IF	8	IF	37	IBF	77	IBF	0	IF			1		592		0.0	
1/18/2022	3	5	20.0	ICF	18	ICF	8	ICF	36	IBF	78	IBCF	0	ICF	0	ICF	0		592	592	0.0	0.0
1/18/2022	4	13	17.1	IBCF	110	IBCF	62	IBCF	29	IBF	0	IBCF	507	IBCF			1		592		0.0	
1/18/2022	5	0	20.9	IF	17	IF	8	IF	138	IBCF	94	IBCF	0	IF			1		592		0.0	
1/18/2022	6	0	20.9	IF	16	IF	8	IF	24	IBF	65	IBF	0	IF			1		592		0.0	
1/18/2022	7	0	20.9	IF	16	IF	8	IF	10	IBMF	19	IBMF	0	IF	127	IBCF	1	1	592	592	0.0	0.0
1/18/2022	8	0	20.9	IF	15	IF	8	IF	13	IBMF	37	IBMF	0	IF			1		592		0.0	
1/18/2022	9	0	20.8	IF	14	IF	8	IF	12	IBF	34	IBF	0	IF			1		592		0.0	
1/18/2022	10	0	20.8	IF	12	IF	8	IF	19	IBF	60	IBF	0	IF			1		592		0.0	
1/18/2022	11	0	20.8	IF	13	IF	8	IF	10	IBF	24	IBF	0	IF	0	IF	1		592	592	0.0	0.0
1/18/2022	12	0	20.8	IF	13	IF	8	IF	8	IBF	0	IBF	0	IF			1		592		0.0	
1/18/2022	13	8	19.4	IBCFM	52	IBCFM	36	IBCFM	2	IBF	0	IBCFM	10	IBCFM			0		592		0.0	
1/18/2022	14	10	17.6	IBCF	115	IBCF	71	IBCF	0	IBF	0	IBCF	597	IBCF			1		592		0.0	
1/18/2022	15	0	20.8	IF	13	IF	8	IF	0	IBF	0	IBF	1	IF	152	IBCFM	1	1	592	592	0.0	0.0
1/18/2022	16	0	20.8	IF	13	IF	8	IF	0	IBF	0	IBF	0	IF			1		592		0.0	
1/18/2022	17	0	20.8	IF	12	IF	8	IF	8	IBF	7	IBF	0	IF			0		592		0.0	
1/18/2022	18	0	20.8	IF	11	IF	8	IF	23	IBF	67	IBF	0	IF			0		592		0.0	
1/18/2022	19	0	20.8	IF	11	IF	8	IF	28	IBF	73	IBF	0	IF	0	IF	1		592	592	0.0	0.0
1/18/2022	20	0	20.8	IF	11	IF	7	IF	28	IBF	73	IBF	0	IF			0		592		0.0	
1/18/2022	21	0	20.8	IF	10	IF	8	IF	22	IBF	66	IBF	0	IF			0		592		0.0	
1/18/2022	22	0	20.8	IF	11	IF	8	IF	25	IBF	70	IBF	0	IF			0		592		0.0	
1/18/2022	23	0	20.8	IF	10	IF	8	IF	26	IBF	71	IBF	0	IF	0	IF	0	0	592	592	0.0	0.0

Average:  
Geometric Mean Average:

Limit:

24 IBCMF	10 IBCMF	0 IBCMF
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean	≥ 75% Removal Efficiency

OR

see above
≤ 69 4-HR Block Average

see above	see above	see above
≤ 12 8-HR. Block Average	≤ 345 °F 4-HR Block Average	≤ 173 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 1/18/22

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.
1/18/2022	0	60	8.9		182		7		28		74		3			14		310		165.4	
1/18/2022	1	60	8.9		181		19		51		63		3			14		310		165.9	
1/18/2022	2	60	8.9		181		7		28		75		2			15		310		166.0	
1/18/2022	3	60	9.1		173		3		20		86		2	3		14		310	310	165.6	165.7
1/18/2022	4	60	9.0		176		6		26		78		1			14		310		166.0	
1/18/2022	5	60	9.1		182		8		23		64		2			14		310		165.1	
1/18/2022	6	60	9.0		191		13		31		57		1			14		310		166.2	
1/18/2022	7	60	9.0		187		14		28		51		2	2		14	14	310	310	166.2	165.9
1/18/2022	8	60	9.1		186		6		35		82		3			14		310		165.6	
1/18/2022	9	60	9.3		191		2		38		96		2			14		310		165.4	
1/18/2022	10	60	9.2		186		0		30		100		4			14		310		165.5	
1/18/2022	11	60	9.2		182		0		26		100		3	3		14		310	310	165.9	165.6
1/18/2022	12	60	9.1		189		0		26		100		3			14		310		166.5	
1/18/2022	13	60	8.9		196		0		22		100		2			14		310		165.7	
1/18/2022	14	60	17.2	IBCM	39	IBCM	9	IBCM	26		66	IBCM	5	IBCM		14		310		166.0	
1/18/2022	15	60	9.3		170		2		24		90		4	3		14	14	310	310	162.9	165.3
1/18/2022	16	60	9.2		188		1		16		92		6			15		310		165.5	
1/18/2022	17	60	9.2		196		1		17		95		8			14		310		166.1	
1/18/2022	18	60	9.1		196		1		19		97		5			14		310		165.7	
1/18/2022	19	60	9.1		181		1		21		96		6	6		14		310	310	166.3	165.9
1/18/2022	20	60	9.3		190		0		18		97		6			14		310		166.1	
1/18/2022	21	60	9.3		189		1		23		98		4			14		310		165.6	
1/18/2022	22	60	9.3		177		1		24		97		7			14		309		165.7	
1/18/2022	23	60	9.3		180		0		21		98		5	5		14	14	311	310	165.0	165.6

Average: Geometric Mean Average:	185	1	<b>OR</b>	96	see above	see above	see above	see above
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 ppmc 4-HR Block Average	≤ 12 lb/hr 8-HR. Block Average	≤ 345 °F 4-HR Block Average	≤ 173 klb/hr 4-HR Block Average

**Status Flags**

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- \* - Shutdown



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



Date 18-Jan-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	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
1	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
2	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
3	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
4	1		1		1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
5	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
6	2	ICF	23	ICF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	4
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		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	1	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	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
18	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
19	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
20	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
21	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
22	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
23	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1

**Status Flags**

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



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



Date 18-Jan-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

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