



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



Date 12/28/22

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
12/28/2022	0	0	20.8	IF	48	IF	6	IF	1187	IBF	99	IBF	22	IF			4		261		11.6	
12/28/2022	1	0	20.9	IF	29	IF	7	IF	1293	IBF	99	IBF	12	IF			4		221		4.5	
12/28/2022	2	0	20.9	IF	25	IF	7	IF	1383	IBF	100	IBF	9	IF			4		191		0.0	
12/28/2022	3	5	20.1	ICF	20	ICF	6	ICF	1277	IBF	100	IBCF	12	ICF	14	ICF	0		171	211	0.0	4.0
12/28/2022	4	12	17.3	IBCF	177	IBCF	69	IBCF	1055	IBF	93	IBCF	584	IBCF			5		172		0.0	
12/28/2022	5	0	20.9	IF	69	IF	7	IF	161	IBCF	96	IBCF	4	IF			4		175		0.0	
12/28/2022	6	0	20.9	IF	54	IF	8	IF	3120	IBF	100	IBF	0	IF			4		165		0.0	
12/28/2022	7	0	20.9	IF	39	IF	8	IF	1944	IBF	100	IBF	0	IF	147	IBCF	4	4	145	164	0.0	0.0
12/28/2022	8	0	20.9	IF	29	IF	8	IF	2021	IBMF	100	IBMF	0	IF			3		116		0.0	
12/28/2022	9	0	20.9	IF	27	IF	8	IF	-4502	IBMF	0	IBMF	0	IF			4		106		0.0	
12/28/2022	10	0	20.9	IF	25	IF	8	IF	-3580	IBF	0	IBF	0	IF			4		101		0.0	
12/28/2022	11	0	20.9	IF	25	IF	8	IF	-3419	IBF	0	IBF	0	IF	0	IF	4		97	105	0.0	0.0
12/28/2022	12	0	20.9	IF	25	IF	8	IF	-2320	IBF	0	IBF	0	IF			3		94		0.0	
12/28/2022	13	0	21.0	IF	26	IF	8	IF	-1951	IBF	0	IBF	0	IF			3		100		0.0	
12/28/2022	14	0	20.9	IF	28	IF	8	IF	-2019	IBF	0	IBF	0	IF			1		122		0.0	
12/28/2022	15	0	20.9	IF	26	IF	8	IF	-2088	IBF	0	IBF	0	IF	0	IF	1	3	121	109	0.0	0.0
12/28/2022	16	6	17.9	IF	535	IF	16	IF	15	IBF	0	IBF	19	IF			1		138		0.0	
12/28/2022	17	60	17.4		503		13		12		0		17				7		162		2.9	
12/28/2022	18	37	16.0		368		13		8		0		8				14		193		10.4	
12/28/2022	19	60	14.2		286		9		6		0		0		8		14		222	192	29.3	14.2
12/28/2022	20	60	12.3		240		6		5		0		0				14		245		52.1	
12/28/2022	21	60	11.8		232		5		5		0		0				14		252		65.3	
12/28/2022	22	60	12.6		228		28		30		6		236				14		272		75.1	
12/28/2022	23	60	10.9		175		7		43		84		28		66		14	13	299	267	145.0	84.4

Average:  
Geometric Mean Average:

Limit:

290	10
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

9
≥ 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 12/28/22

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.
12/28/2022	0	60	11.0		196		1		18		96		2			14		311		166.5	
12/28/2022	1	60	11.0		198		1		14		97		2			15		311		166.9	
12/28/2022	2	60	11.0		198		0		12		97		2			15		311		166.2	
12/28/2022	3	60	11.0		197		1		16		91		2	2		14		311	311	167.1	166.7
12/28/2022	4	60	11.1		199		2		15		85		4			13		311		165.5	
12/28/2022	5	60	11.0		197		1		12		95		3			14		311		165.9	
12/28/2022	6	60	11.1		197		6		19		68		2			14		311		167.1	
12/28/2022	7	60	10.9		198		2		11		82		3	3		13	14	311	311	164.7	165.8
12/28/2022	8	60	11.0		198		1		16		92		3			12		311		166.1	
12/28/2022	9	60	11.2		195		0		29		100		2			13		311		166.3	
12/28/2022	10	60	11.3		197		1		26		97		2			14		311		167.7	
12/28/2022	11	60	11.0		198		0		22		100		3	2		14		311	311	166.4	166.6
12/28/2022	12	60	10.9		171		3		38		93		10			14		311		171.2	
12/28/2022	13	60	11.6		191		0		18		100		0			15		311		167.0	
12/28/2022	14	60	11.1		198		0		21		100		2			14		311		166.0	
12/28/2022	15	60	10.9		198		0		16		100		3	4		15	14	311	311	166.1	167.6
12/28/2022	16	60	11.0		197		0		21		100		3			14		311		166.6	
12/28/2022	17	60	10.8		199		0		24		100		4			14		311		166.6	
12/28/2022	18	60	10.9		196		0		26		100		3			15		311		166.8	
12/28/2022	19	60	10.9		197		0		32		100		3	3		14		311	311	165.8	166.5
12/28/2022	20	60	10.9		198		0		27		100		3			14		311		166.8	
12/28/2022	21	60	10.9		197		0		26		100		3			14		311		166.2	
12/28/2022	22	60	11.1		198		0		26		100		3			15		311		166.1	
12/28/2022	23	60	11.1		198		0		26		100		3	3		15	14	311	311	165.2	166.1

Average: Geometric Mean Average:	196	0	<b>OR</b>	100	see above	see above	see above	see above			
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 4-HR Block Average	ppmc	≥ 12 8-HR. Block Average	lb/hr	≤ 345 °F 4-HR Block Average	≤ 173 4-HR Block Average	klb/hr

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



Date 28-Dec-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	2	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	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	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		1		1		1		1		1		1		1		1		1		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		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		2		1		1		1
23	1		2		2		2		2		2		2		2		2		2		2

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



Date 28-Dec-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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