



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



Date 12/10/22

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 Hr Block
12/10/2022	0	0	20.9	IF	21	IF	9	IF	-193	IBF	0	IBF	0	IF			3		49		0.0	
12/10/2022	1	0	20.9	IF	21	IF	9	IF	-208	IBF	0	IBF	0	IF			3		49		0.0	
12/10/2022	2	0	19.7	IF	466	IF	105	IF	14	IBF	0	IBF	28	IF			3		60		0.0	
12/10/2022	3	5	18.5	ICF	437	ICF	36	ICF	10	IBF	0	IBCF	22	ICF	13	ICF	7		90	62	0.0	0.0
12/10/2022	4	26	16.4	IBCF	380	IBCF	17	IBCF	4	IBF	0	IBCF	44	IBCF			9		103		0.6	
12/10/2022	5	46	13.5		277		10		4		0		22				13		139		23.1	
12/10/2022	6	56	13.6		277		10		4		0		38				14		182		34.9	
12/10/2022	7	60	12.1		220		7		4		0		12	24			14	14	216	179	62.0	40.0
12/10/2022	8	60	12.7		246		8		6		0		7				14		226		65.0	
12/10/2022	9	60	9.5		162		13		23		44		15				14		244		83.6	
12/10/2022	10	60	13.2		285		41		37		0		35				13		316		111.9	
12/10/2022	11	60	11.4		286		36		50		28		18	19			14		310	274	161.4	105.4
12/10/2022	12	60	11.5		226		44		57		22		17				14		310		163.5	
12/10/2022	13	60	11.4		141		38		50		24		15				13		309		166.9	
12/10/2022	14	60	11.6		140		53		59		11		14				14		309		164.8	
12/10/2022	15	60	11.5		141		36		57		36		15	15			14	14	309	310	163.9	164.8
12/10/2022	16	60	11.4		148		41		48		14		11				14		309		166.9	
12/10/2022	17	60	11.5		141		50		47		0		9				14		309		165.4	
12/10/2022	18	60	11.6		143		31		52		42		8				13		307		164.4	
12/10/2022	19	60	11.5		157		10		46		79		8	9			13		310	309	165.7	165.6
12/10/2022	20	60	11.6		199		23		53		56		6				13		309		165.6	
12/10/2022	21	60	11.5		200		17		52		67		7				14		309		168.1	
12/10/2022	22	60	11.7		199		9		53		83		8				14		309		165.5	
12/10/2022	23	60	11.6		199		17		50		66		8	7			13	14	310	309	164.2	165.8

Average: Geometric Mean Average:	199	21	<b>OR</b>	28	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**

- 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 12/10/22

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.
12/10/2022	0	60	11.0		191		17		26		33		2			14		311		165.7	
12/10/2022	1	60	10.7		194		15		23		38		1			14		311		166.2	
12/10/2022	2	60	10.9		189		20		39		50		1			14		311		165.9	
12/10/2022	3	60	10.6		197		21		50		57		2	2		14		311	311	166.8	166.1
12/10/2022	4	60	10.6		198		23		36		37		4			14		311		166.5	
12/10/2022	5	60	10.6		196		21		36		41		2			14		311		165.6	
12/10/2022	6	60	10.6		194		14		21		33		3			13		311		165.2	
12/10/2022	7	60	10.5		193		20		26		22		4	3		15	14	311	311	166.5	166.0
12/10/2022	8	60	10.4		190		13		20		35		6			14		311		162.9	
12/10/2022	9	60	10.6		195		17		25		32		2			14		311		166.8	
12/10/2022	10	60	10.8		192		16		19		17		3			14		310		166.0	
12/10/2022	11	60	10.5		195		15		16		5		3	3		14		311	311	166.7	165.6
12/10/2022	12	60	10.6		194		10		11		6		3			14		311		166.3	
12/10/2022	13	60	10.4		195		8		13		41		3			14		311		166.2	
12/10/2022	14	60	10.3		194		7		15		53		4			14		311		166.6	
12/10/2022	15	60	10.3		192		7		17		57		3	3		13	14	311	311	166.3	166.3
12/10/2022	16	60	10.6		193		6		12		55		2			14		311		166.7	
12/10/2022	17	60	10.8		193		19		22		17		1			14		311		166.3	
12/10/2022	18	60	10.8		191		18		23		23		1			14		311		166.3	
12/10/2022	19	60	10.7		198		3		18		83		2	2		14		311	311	165.9	166.3
12/10/2022	20	60	10.5		196		3		16		84		2			14		311		166.5	
12/10/2022	21	60	10.5		197		3		18		85		2			14		311		166.7	
12/10/2022	22	60	10.5		196		2		11		79		2			14		311		164.8	
12/10/2022	23	60	10.5		196		3		16		80		2	2		14	14	311	311	166.0	166.0

Average: Geometric Mean Average:	<b>194</b>	<b>10</b>	<b>OR</b>	<b>51</b>	see above	see above	see above	see above
Limit:	<b>≤ 205</b> 24-HR Block Avg.	<b>≤ 29</b> 24-HR Geometric Mean		<b>≥ 75%</b> Removal Efficiency	<b>≤ 69</b> ppmc 4-HR Block Average	<b>≥ 12</b> lb/hr 8-HR. Block Average	<b>≤ 345</b> °F 4-HR Block Average	<b>≤ 173</b> klb/hr 4-HR Block Average

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



Date 10-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	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		1		1
5	1		1		2		2		2		2		2		2	IF	1	IF	2	IF	2
6	2	ICF	5	IC	1		1		1		1		1		1		1		1		2
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		2		1		1
11	1		1		2		1		1		1		1		1		1		1		1
12	1		1		1		1		1		1		1		2		2		1		1
13	2		2		2		1		2		2		1		1		2		2		1
14	2		1		1		2		2		2		2		2		2		2		2
15	2		2		2		2		2		2		2		2		2		2		2
16	2		1		2		2		2		1		1		1		1		1		1
17	1		1		2		1		1		2		2		2		2		2		1
18	2		2		2		2		2		2		2		2		2		2		2
19	1		2		2		1		2		1		1		1		1		1		1
20	1		2		2		2		2		2		2		2		2		2		2
21	2		1		2		2		1		1		1		1		2		1		1
22	2		1		2		2		2		2		2		2		2		2		1
23	2		2		1		1		2		1		1		1		1		1		1

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



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



Date 10-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	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	1	1	1	2	2	2	2	2	1
9	2	2	2	2	2	2	2	2	2	2	2
10	2	1	1	1	2	2	1	2	2	2	1
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	1	1	1	1	1	1
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	1	1	2	1	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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