



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



Date 10/11/22

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.
10/11/2022	0	60	10.5		183		13		44		70		6			13		308		165.8	
10/11/2022	1	60	10.7		187		11		36		69		6			13		310		162.7	
10/11/2022	2	60	10.5		182		11		33		67		6			13		315		166.2	
10/11/2022	3	60	9.8		151		4		70		94		13	8		13		294	307	170.7	166.4
10/11/2022	4	60	10.5		170		4		42		91	IBCT	27		12		291		166.1		
10/11/2022	5	60	10.5		178		10		30		69	IT	5		12		301		164.5		
10/11/2022	6	60	10.2		172		5		28		80	IT	4		14		303		166.0		
10/11/2022	7	60	10.7		184		8		23		64	IT	4	10	IBCT	13	13	305	300	164.0	165.1
10/11/2022	8	60	10.7		178		8		27		69	IT	4		13		312		164.5		
10/11/2022	9	60	11.6		197		3		19		85	IBCT	199	IBCT	13		315		157.5		
10/11/2022	10	60	7.0	IBCM	115	IBCM	32	IBCM	19	0	IBCM	218	IBCT	13		13	321		164.7		
10/11/2022	11	60	10.0	IBCM	184	IBCM	12	IBCM	26	55	IBCM	15	IBCT	109	IBCT	14		316	316	165.5	163.0
10/11/2022	12	60	8.6	IBCM	122	IBCM	17	IBCM	27	39	IBCM	210	IBCT		14		309		165.8		
10/11/2022	13	60	10.6		184		4		21		80		6		14		310		165.0		
10/11/2022	14	60	10.7		184		8		34		77		6		14		309		164.7		
10/11/2022	15	60	10.5		185		8		27		72		5	6	14	14	309	309	165.5	165.3	
10/11/2022	16	60	10.5		183		6		23		72		5		14		310		165.7		
10/11/2022	17	60	10.6		187		7		26		73		5		14		309		163.5		
10/11/2022	18	60	10.5		182		6		27		78		5		15		309		166.1		
10/11/2022	19	60	10.5		196		5		25		79		5	5	14		309	309	164.0	164.8	
10/11/2022	20	60	10.6		190		8		32		74		4		14		309		165.3		
10/11/2022	21	60	10.6		190		10		35		72		4		14		310		164.8		
10/11/2022	22	60	10.6		182		12		29		59		5		14		309		163.8		
10/11/2022	23	60	10.3		157		7		26		72		6	5	14	14	309	309	165.7	164.9	

Average: Geometric Mean Average:	<b>181</b>	<b>7</b>	OR	<b>77</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

**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 10/11/22

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 Hr Block
10/11/2022	0	60	11.3		195		22		68		68		10			12		319		165.5		
10/11/2022	1	60	11.3		197		8		38		78		12			12		314		163.8		
10/11/2022	2	60	11.3		197		9		48		81		11			12		310		166.3		
10/11/2022	3	60	11.1		196		9		61		86		8	10		13		302	311	166.3	165.5	
10/11/2022	4	60	11.3		196		18		70		74		150	IBCT		13		303		166.1		
10/11/2022	5	60	11.5		196		20		51		61		10	IT		13		307		162.2		
10/11/2022	6	60	11.5		194		9		24		65		9	IT		12		310		163.6		
10/11/2022	7	60	11.7		180		6		19		69		9	IT	44	IBCT	13		310	308	162.6	163.6
10/11/2022	8	60	11.5		190		5		23		78		12	IT		13		310		162.6		
10/11/2022	9	60	11.2		198		9		36		75		809	IBCT		13		310		166.8		
10/11/2022	10	60	8.9	IBCM	119	IBCM	15	IBCM	40	IBCM	63	IBCM	525	IBCT		14		310		164.8		
10/11/2022	11	60	11.0	IBCM	194	IBCM	5	IBCM	43	IBCM	88	IBCM	14	IBCT	340	IBCT	14		310	310	164.9	164.8
10/11/2022	12	60	11.2		196		10		50		79		8			14		310		166.6		
10/11/2022	13	60	11.1		198		10		52		80		9			14		310		165.1		
10/11/2022	14	60	11.0		197		17		65		73		10			14		310		165.8		
10/11/2022	15	60	11.1		196		11		43		74		8	9		13	14	310	310	165.8	165.8	
10/11/2022	16	60	11.1		195		18		63		72		9			14		310		165.4		
10/11/2022	17	60	11.1		196		13		47		72		8			14		310		165.4		
10/11/2022	18	60	11.2		198		12		42		73		8			14		310		165.1		
10/11/2022	19	60	11.2		198		13		53		76		8	8		14		310	310	165.6	165.4	
10/11/2022	20	60	11.1		197		12		46		74		8			14		310		165.6		
10/11/2022	21	60	11.2		195		17		62		72		9			14		310		165.6		
10/11/2022	22	60	11.2		198		11		45		76		8			14		310		165.8		
10/11/2022	23	60	11.2		195		9		38		77		7	8		14	14	310	310	165.8	165.7	

<b>Average:</b>	<b>195</b>	<b>11</b>	<b>75</b>	see above	see above	see above
<b>Geometric Mean Average:</b>						
<b>Limit:</b>	<b>≤ 205</b> 24-HR Block Avg.	<b>≤ 29</b> 24-HR Geometric Mean	<b>OR</b>	<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 11-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	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	3	IC	5	IC	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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 B - Bad                            M - Maintenance                      P - Purge                      E - Excluded                      \* - Shutdown



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



Date 11-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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