



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



Date 6/19/23

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.
6/19/2023	0	60	10.1		134		0		47		100		4			13		309		162.8	
6/19/2023	1	60	10.1		139		0		44		100		4			13		310		165.9	
6/19/2023	2	60	9.9		132		0		47		99		4			14		310		166.1	
6/19/2023	3	60	10.0		139		2		61		96		4	4		13		309	310	165.2	165.0
6/19/2023	4	60	9.9		137		7		70		90		3			13		309		168.2	
6/19/2023	5	60	10.1		136		5		64		92		3			13		310		165.5	
6/19/2023	6	60	9.8		127		2		60		96		5			13		309		165.8	
6/19/2023	7	60	10.0		119		0		43		99		7	5		13	13	309	309	167.7	166.8
6/19/2023	8	60	10.2		132		3		57		94		5			13		310		165.7	
6/19/2023	9	60	9.9		137		35		114		69		6			12		310		166.5	
6/19/2023	10	60	10.2		132		38		117		67		8			13		309		167.3	
6/19/2023	11	60	10.1		137		1		44		97		6	6		13		310	310	165.4	166.2
6/19/2023	12	60	10.1		138		0		26		100		5			11		309		167.3	
6/19/2023	13	60	9.7		124		2		34		95		160			13		309		164.7	
6/19/2023	14	60	10.2		132		0		26		100		6			13		309		157.0	
6/19/2023	15	60	10.2		129		0		22		100		6	44		12	12	309	309	152.3	160.3
6/19/2023	16	60	9.9		138		2		47		95		6			13		310		164.8	
6/19/2023	17	60	10.1		133		1		38		97		5			13		309		165.8	
6/19/2023	18	60	10.1		141		4		43		92		4			13		309		167.0	
6/19/2023	19	60	10.1		139		8		51		85		5	5		14		309	309	165.0	165.6
6/19/2023	20	60	9.9		138		0		38		99		4			13		310		165.4	
6/19/2023	21	60	9.7		137		0		35		100		5			14		309		166.1	
6/19/2023	22	60	9.6		129		0		42		100		5			13		310		165.0	
6/19/2023	23	60	9.6		132		0		39		100		5	5		13	13	310	310	164.6	165.3

Average:  
Geometric Mean Average:

Limit:

134	1
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

99
≥ 80% 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 6/19/23

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.
6/19/2023	0	60	12.5		141		14		77		82		1			13		310		166.3	
6/19/2023	1	60	12.5		137		9		61		86		1			13		310		165.3	
6/19/2023	2	60	12.4		134		13		74		83		4			13		310		163.1	
6/19/2023	3	60	12.4		134		20		89		77		12	4		13		310	310	167.0	165.4
6/19/2023	4	60	12.5		140		20		88		77		1			14		310		167.8	
6/19/2023	5	60	12.5		140		22		97		77		1			14		310		166.0	
6/19/2023	6	60	12.4		140		16		84		81		1			15		310		166.6	
6/19/2023	7	60	12.3		139		4		42		90		1	1		14	14	310	310	166.0	166.6
6/19/2023	8	60	12.3		140		7		46		84		1			15		310		165.5	
6/19/2023	9	60	12.3		139		10		53		81		1			14		310		167.3	
6/19/2023	10	60	12.4		140		17		75		77		1			14		310		164.9	
6/19/2023	11	60	12.5		140		18		76		76		1	1		13		310	310	167.6	166.3
6/19/2023	12	60	12.4		140		3		35		92		1			11		310		165.7	
6/19/2023	13	60	12.2		138		2		34		95		1			13		310		165.0	
6/19/2023	14	60	12.6		144		12		44		72		0			12		310		167.3	
6/19/2023	15	60	12.5		138		2		31		93		1	1		12	13	310	310	165.9	166.0
6/19/2023	16	60	12.5		139		12		47		73		1			12		310		166.2	
6/19/2023	17	60	12.5		140		14		45		69		1			13		310		166.6	
6/19/2023	18	60	12.6		138		14		50		72		1			13		310		166.2	
6/19/2023	19	60	12.6		141		8		42		82		1	1		14		310	310	166.9	166.5
6/19/2023	20	60	12.5		139		11		47		76		0			13		310		166.9	
6/19/2023	21	60	12.6		139		2		39		94		0			13		310		166.1	
6/19/2023	22	60	12.5		140		2		38		96		0			13		310		165.3	
6/19/2023	23	60	12.5		142		2		40		94		0	0		12	13	310	310	165.8	166.0

Average: Geometric Mean Average:	<b>139</b>	<b>8</b>	<b>OR</b>	<b>85</b>	see above	see above	see above	see above
Limit:	<b>≤ 150</b> 24-HR Block Avg.	<b>≤ 29</b> 24-HR Geometric Mean		<b>≥ 80%</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 19-Jun-2023

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

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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 19-Jun-2023

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	3	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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