



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



Date 7/24/23

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.
7/24/2023	0	60	10.1		141		18		69		74		0			12		313		168.9	
7/24/2023	1	60	10.2		138		16		67		76		0			13		309		164.1	
7/24/2023	2	60	10.0		143		21		60		65		0			13		311		165.6	
7/24/2023	3	60	10.0		140		17		57		71		0		0		318	313	167.2	166.4	
7/24/2023	4	60	10.0		149		17		65		75		0			14		314		163.9	
7/24/2023	5	60	9.8		141		10		38		74		0			13		320		166.5	
7/24/2023	6	60	10.1		140		7		34		80		0			11		322		165.4	
7/24/2023	7	60	10.0		145		6		25		76		0		0	15	13	322	320	166.8	165.6
7/24/2023	8	60	10.0		138		3		36		91		0			18		309		166.8	
7/24/2023	9	60	9.8		144		3		33		92		0			11		309		167.7	
7/24/2023	10	60	9.8		139		0		15		100		0			22		309		166.8	
7/24/2023	11	60	9.5		146		0		17		100		1		0	19		310	309	170.0	167.8
7/24/2023	12	60	9.7		139		2		36		94		0			15		309		168.3	
7/24/2023	13	60	9.7		143		2		29		93		0			13		316		167.3	
7/24/2023	14	60	10.1		143		1		38		98		0			13		312		166.5	
7/24/2023	15	60	10.2		141		1		44		98		0		0	13	16	309	312	166.0	167.0
7/24/2023	16	60	10.2		143		0		36		100		0			13		310		161.1	
7/24/2023	17	60	10.0		142		0		34		100		0			13		310		166.6	
7/24/2023	18	60	9.9		139		3		58		95		0			13		308		166.8	
7/24/2023	19	60	9.7		141		0		45		100		0		0	13		310	309	167.1	165.4
7/24/2023	20	60	9.7		138		0		46		99		2			13		309		165.0	
7/24/2023	21	60	10.0		141		0		40		100		0			14		310		162.5	
7/24/2023	22	60	9.9		145		0		42		100		0			13		310		164.8	
7/24/2023	23	60	10.2		140		0		41		100		0		1	13	13	310	310	167.6	165.0

Average:  
Geometric Mean Average:

Limit:

142	1	98
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean	≥ 80% Removal Efficiency

OR

see above
≤ 69 ppmc 4-HR Block Average

see above	see above	see above
≥ 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 7/24/23

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.
7/24/2023	0	22	16.9	IF	95	IF	7	IF	0	IBF	0	IBF	49	IF		0		111		2.0	
7/24/2023	1	60	16.7		110		0		0		0		15			13		129		4.3	
7/24/2023	2	60	15.7		112		0		0		0		9			15		146		14.2	
7/24/2023	3	60	13.2		100		0		0		0		3	9		14		175	150	37.0	18.5
7/24/2023	4	60	12.7		101		0		0		0		5			11		202		48.7	
7/24/2023	5	60	11.9		97		0		1	100	5		5			18		221		56.7	
7/24/2023	6	60	11.1		113		16		11	0	14		14			3		263		87.1	
7/24/2023	7	60	10.6		138		0		44	100	18	11			13	12	310	249	167.6	90.0	
7/24/2023	8	60	10.9		140		0		42	100	15				14		310		167.5		
7/24/2023	9	60	10.7		140		0		47	100	13				11		310		165.4		
7/24/2023	10	60	10.7		138		0		31	100	12				14		310		167.3		
7/24/2023	11	60	10.6		140		0		38	100	7	12			13		310	310	168.0	167.1	
7/24/2023	12	60	10.4		139		4		77	94	10				14		310		164.7		
7/24/2023	13	60	10.5		141		6		95	94	10				14		310		167.1		
7/24/2023	14	60	10.5		139		0		73	100	9				14		310		164.4		
7/24/2023	15	60	10.4		140		1		58	99	8	9			13	13	310	310	166.5	165.7	
7/24/2023	16	60	10.5		141		0		43	100	6				13		310		167.0		
7/24/2023	17	60	10.3		141		0		35	100	8				13		310		166.9		
7/24/2023	18	60	10.4		138		0		37	100	9				13		310		166.1		
7/24/2023	19	60	10.5		141		0		38	100	7	8			13		310	310	167.8	167.0	
7/24/2023	20	60	10.5		140		0		46	100	7				13		310		167.3		
7/24/2023	21	60	10.3		140		0		53	100	6				13		310		166.2		
7/24/2023	22	60	10.1		139		0		47	100	6				13		310		166.1		
7/24/2023	23	60	10.3		140		0		65	100	5	6			13	13	310	310	167.7	166.8	

Average:  
Geometric Mean Average:

Limit:

131	0
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

100
≥ 80% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≥ 12 8-HR. Block Average

lb/hr

see above
≤ 345 °F 4-HR Block Average

°F

see above
≤ 173 4-HR Block Average

klb/hr

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



Date 24-Jul-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

**Status Flags**

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

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