



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



Date 11/23/23

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.
11/23/2023	0	60	10.5		140		11		55		79		0			14		309		167.9	
11/23/2023	1	60	10.6		141		9		51		83		0			12		309		166.4	
11/23/2023	2	60	10.6		141		4		38		89		0			13		309		166.7	
11/23/2023	3	60	10.9		140		9		44		80		0	0		13		309	309	167.0	167.0
11/23/2023	4	60	10.5		141		9		55		85		7			13		310		167.0	
11/23/2023	5	60	10.6		143		4		42		90		21			13		310		168.6	
11/23/2023	6	60	10.9		137		10		45		77		0			13		309		165.6	
11/23/2023	7	60	10.7		141		8		39		80		53	20		13	13	309	309	167.8	167.2
11/23/2023	8	60	10.5		142		4		34		89		0			13		309		166.4	
11/23/2023	9	60	10.6		141		7		36		81		0			13		309		169.2	
11/23/2023	10	60	10.6		140		1		31		96		0			13		309		167.2	
11/23/2023	11	60	10.6		141		2		31		94		0	0		14		309	309	167.1	167.5
11/23/2023	12	60	10.7		140		3		38		91		0			13		309		165.6	
11/23/2023	13	60	10.7		143		3		40		92		0			13		310		166.4	
11/23/2023	14	60	10.6		140		2		35		96		0			13		310		167.5	
11/23/2023	15	60	10.6		142		4		40		90		0	0		13	13	310	309	168.6	167.0
11/23/2023	16	60	10.7		140		7		50		87		0			13		309		167.8	
11/23/2023	17	60	10.7		141		13		59		79		0			13		310		165.9	
11/23/2023	18	60	10.5		141		5		43		88		0			13		310		167.6	
11/23/2023	19	60	10.7		139		7		43		83		0	0		13		309	309	167.9	167.3
11/23/2023	20	60	10.5		143		9		49		81		0			13		310		166.6	
11/23/2023	21	60	10.7		141		15		54		73		0			13		309		167.8	
11/23/2023	22	60	10.8		140		6		45		87		0			13		309		166.8	
11/23/2023	23	60	10.8		140		7		50		85		15	4		13	13	310	309	164.3	166.4

Average:  
Geometric Mean Average:

Limit:

141	6
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

87
≥ 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



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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.
11/23/2023	0	60	9.7		138		1		46		97		5			14		310		167.0	
11/23/2023	1	60	9.7		140		2		47		95		4			13		310		167.5	
11/23/2023	2	60	9.7		140		1		45		97		4			13		310		167.4	
11/23/2023	3	60	10.1		139		3		47		93		5	4		13		310	310	166.9	167.2
11/23/2023	4	60	9.7		140		3		50		94		6			13		310		168.1	
11/23/2023	5	60	10.0		138		1		31		98		5			13		310		166.6	
11/23/2023	6	60	10.2		141		3		36		92		5			13		310		167.8	
11/23/2023	7	60	10.1		138		1		35		98		6	6		13	13	310	310	167.9	167.6
11/23/2023	8	60	10.2		140		0		30		99		6			14		310		166.8	
11/23/2023	9	60	10.0		140		0		30		100		6			13		310		167.8	
11/23/2023	10	60	10.0		138		0		32		100		6			13		310		166.7	
11/23/2023	11	60	10.5		140		0		31		100		7	6		13		310	310	167.6	167.2
11/23/2023	12	60	10.2		139		8		63		87		6			13		309		167.6	
11/23/2023	13	60	10.2		139		10		66		85		5			13		310		168.2	
11/23/2023	14	60	10.1		139		5		50		89		5			14		310		167.1	
11/23/2023	15	60	10.1		140		1		46		98		5	5		13	13	310	310	167.8	167.7
11/23/2023	16	60	10.2		140		5		53		91		5			13		310		167.4	
11/23/2023	17	60	10.1		140		4		49		92		5			14		310		167.0	
11/23/2023	18	60	10.0		140		0		39		99		5			13		310		168.0	
11/23/2023	19	60	10.1		138		2		41		96		5	5		13		310	310	168.0	167.6
11/23/2023	20	60	10.0		141		4		49		92		5			13		310		167.7	
11/23/2023	21	60	10.3		138		5		45		90		5			13		310		167.4	
11/23/2023	22	60	10.2		141		3		42		94		5			13		310		167.8	
11/23/2023	23	60	10.2		139		4		44		90		5	5		13	13	310	310	167.7	167.7

Average:  
Geometric Mean Average:

Limit:

140	1
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

97
≥ 80% Removal Efficiency

see above
≤ 69 4-HR Block Average ppmc

see above
≥ 12 8-HR. Block Average lb/hr

see above
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see above
≤ 173 4-HR Block Average klb/hr

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



Date 23-Nov-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	0	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 23-Nov-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	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	0	IBC	5	IBC	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	2	2	2	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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