



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



Date 4/23/23

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.
4/23/2023	0	60	10.4		141		10		74		87		2			14		305		164.5	
4/23/2023	1	60	10.3		140		6		73		91		3			13		304		165.1	
4/23/2023	2	60	10.4		140		9		80		89		3			13		304		165.0	
4/23/2023	3	60	10.3		139		7		70		90		2	2		13		304	304	163.7	164.6
4/23/2023	4	60	10.3		142		6		67		91		1			13		305		165.4	
4/23/2023	5	60	10.3		141		12		84		85		1			13		304		165.7	
4/23/2023	6	60	10.2		139		10		84		88		1			13		305		163.6	
4/23/2023	7	60	10.0		140		4		73		95		2	1		13	13	304	304	164.1	164.7
4/23/2023	8	60	10.1		139		3		80		96		2			13		304		163.5	
4/23/2023	9	60	10.2		140		1		71		99		1			13		305		163.9	
4/23/2023	10	60	10.2		142		1		71		98		1			13		304		165.4	
4/23/2023	11	60	10.4		141		20		137		85		1	1		14		304	304	163.5	164.1
4/23/2023	12	60	10.4		144		27		159		83		1			13		304		165.6	
4/23/2023	13	60	10.2		136		6		82		92		1			14		304		164.8	
4/23/2023	14	60	10.2		142		1		64		98		1			14		304		164.6	
4/23/2023	15	60	10.3		138		2		69		98		1	1		14	14	304	304	164.0	164.7
4/23/2023	16	60	10.1		141		5		79		94		1			13		305		164.4	
4/23/2023	17	60	10.2		140		10		87		88		2			14		304		162.9	
4/23/2023	18	60	10.4		141		12		81		85		0			14		304		164.7	
4/23/2023	19	60	10.3		143		9		77		88		1	1		14		305	304	165.3	164.3
4/23/2023	20	60	10.3		140		12		86		86		1			14		304		163.8	
4/23/2023	21	60	10.1		138		8		75		90		1			14		304		163.7	
4/23/2023	22	60	10.0		140		9		87		90		1			14		304		165.7	
4/23/2023	23	60	10.3		144		20		114		82		2	1		13	14	305	304	166.3	164.9

Average:  
Geometric Mean Average:

Limit:

141	6
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

92
≥ 75% 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 4/23/23

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.
4/23/2023	0	60	11.2		142		1		45		98		0			14		310		167.2	
4/23/2023	1	60	11.2		138		1		43		97		0			12		310		166.7	
4/23/2023	2	60	11.3		139		1		41		99		1			14		310		166.4	
4/23/2023	3	60	11.2		140		0		40		100		0	0		13		310	310	167.1	166.8
4/23/2023	4	60	11.2		142		1		43		98		1			14		310		166.5	
4/23/2023	5	60	11.2		137		1		41		96		0			13		310		166.6	
4/23/2023	6	60	11.2		140		5		49		90		0			17		310		166.1	
4/23/2023	7	60	11.1		140		2		47		95		1	1		15	14	310	310	166.7	166.5
4/23/2023	8	60	11.1		140		0		33		100		0			14		310		166.6	
4/23/2023	9	60	11.1		140		0		44		100		1			14		310		165.4	
4/23/2023	10	60	11.1		138		0		46		100		1			13		310		167.8	
4/23/2023	11	60	11.1		140		1		54		98		1	1		14		310	310	166.0	166.4
4/23/2023	12	60	11.3		141		12		90		87		0			12		310		165.8	
4/23/2023	13	60	11.2		136		2		58		96		0			14		310		167.2	
4/23/2023	14	60	11.2		141		4		64		94		0			14		310		166.7	
4/23/2023	15	60	11.2		142		1		52		97		0	0		14	14	310	310	166.6	166.6
4/23/2023	16	60	11.2		137		2		51		96		0			14		310		167.7	
4/23/2023	17	60	11.1		141		1		51		98		0			13		310		165.8	
4/23/2023	18	60	11.3		139		2		56		96		0			14		310		165.7	
4/23/2023	19	60	11.3		140		5		63		91		0	0		14		310	310	166.2	166.4
4/23/2023	20	60	11.3		140		6		61		90		0			13		310		165.9	
4/23/2023	21	60	11.1		140		7		60		89		0			12		310		166.9	
4/23/2023	22	60	11.1		139		10		72		86		0			14		310		166.3	
4/23/2023	23	60	11.1		141		9		64		86		0	0		13	13	310	310	167.0	166.5

Average: Geometric Mean Average:	140	1	<b>OR</b>	98	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

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



Date 23-Apr-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	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	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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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-Apr-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	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	1	0	0	0	1	0
6	3	IBC	4	IBC	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	1	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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