



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



Date 4/4/23

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 Hr Block
4/4/2023	0	60	10.0		142		7		87		92		15			13		309		167.1		
4/4/2023	1	60	10.1		140		2		76		97		13			13		309		165.6		
4/4/2023	2	60	10.3		143		5		86		94		13			14		309		165.4		
4/4/2023	3	60	10.4		142		12		93		88		11	13		13		309	309	165.7	165.9	
4/4/2023	4	60	10.5		140		18		99		82		13			13		309		164.6		
4/4/2023	5	60	10.4		141		14		90		84		13			14		309		164.2		
4/4/2023	6	60	10.2		138		11		86		87		13			13		309		165.4		
4/4/2023	7	60	10.3		138		9		82		88		12	13		13	13	309	309	165.8	165.0	
4/4/2023	8	60	10.6		145		8		82		90		13			13		309		163.8		
4/4/2023	9	60	10.4		140		12		94		87		16			13		309		166.1		
4/4/2023	10	60	10.6		141		15		90		84		14			14		309		164.6		
4/4/2023	11	60	10.8	IBM	176	IBM	17	IBM	77		78	IBM	13	IBM	14	13		309	309	163.7	164.5	
4/4/2023	12	60	18.1	IBM	106	IBM	30	IBM	82		64	IBM	105	IBM		13		310		165.2		
4/4/2023	13	60	20.3	IBM	13	IBM	1	IBM	79		99	IBM	0	IBM		13		309		164.8		
4/4/2023	14	60	21.0	IBM	0	IBM	0	IBM	86		100	IBM	3	IBM		13		309		165.9		
4/4/2023	15	60	20.7	IBM	0	IBM	0	IBM	86		100	IBM	9	IBM	29	IBM	12	13	309	309	166.3	165.5
4/4/2023	16	60	20.7	IBM	0	IBM	0	IBM	90		100	IBM	12	IBM		12		309		165.3		
4/4/2023	17	60	9.8		126		0		67		100		36			13		309		165.0		
4/4/2023	18	60	9.9		132		0		65		100		35			15		309		165.6		
4/4/2023	19	60	9.8		143		7		84		92		12	28		16		309	309	164.4	165.1	
4/4/2023	20	60	9.7		141		20		119		83		11			15		309		165.8		
4/4/2023	21	60	9.6		140		15		99		84		12			15		310		165.4		
4/4/2023	22	60	9.6		141		18		98		81		12			15		309		168.8		
4/4/2023	23	60	9.8		140		10		73		87		10	11		15	14	309	309	166.2	166.6	

Average:  
Geometric Mean Average:

Limit:

140	6
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

94
≥ 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



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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.
4/4/2023	0	60	10.1		139		1		38		97		2			14		310		166.8	
4/4/2023	1	60	10.4		142		1		39		98		2			14		310		166.8	
4/4/2023	2	60	10.4		138		2		48		95		1			14		310		166.8	
4/4/2023	3	60	10.5		138		6		60		91		1	2		14		310	310	167.0	166.9
4/4/2023	4	60	10.5		147		9		57		84		2			13		310		166.6	
4/4/2023	5	60	10.5		140		4		41		89		3			14		310		164.9	
4/4/2023	6	60	10.4		138		6		45		87		3			14	14	310		166.4	
4/4/2023	7	60	10.8		141		5		36		85		3	3		14		310	310	166.6	166.1
4/4/2023	8	60	11.4		135		10		49		79		2			14		310		166.8	
4/4/2023	9	60	11.2		144		9		67		86		4			14		310		167.3	
4/4/2023	10	60	11.1		138		3		36		93		5			14		310		166.3	
4/4/2023	11	60	11.0		139		2		35		94		4	4		14		310	310	166.6	166.8
4/4/2023	12	60	10.8		141		2		40		95		5			14		310		166.3	
4/4/2023	13	60	10.8		140		1		38		96		3			14		310		167.4	
4/4/2023	14	60	11.0		140		1		31		96		3			14		310		166.8	
4/4/2023	15	60	10.9		137		2		41		95		3	4		14	14	310	310	166.0	166.6
4/4/2023	16	60	10.9		141		2		40		94		3			14		310		167.2	
4/4/2023	17	60	11.2		140		3		35		91		3			13		310		166.1	
4/4/2023	18	60	11.1		139		1		23		96		2			13		310		166.3	
4/4/2023	19	60	11.0		142		3		39		93		3	3		14		310	310	168.3	167.0
4/4/2023	20	60	11.0		140		3		38		92		2			13		310		166.1	
4/4/2023	21	60	11.0		138		4		39		91		3			14		310		166.2	
4/4/2023	22	60	11.2		142		2		30		92		2			14		310		165.7	
4/4/2023	23	60	11.2		137		4		37		89		2	2		14	14	310	310	163.6	165.4

Average:  
Geometric Mean Average:

Limit:

140	3
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

93
≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

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



Date 04-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	3	2	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

**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 04-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	2	3	2	2	2	3	3	3	2	3	2
1	3	3	3	2	2	3	2	3	3	3	3
2	2	3	2	3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3	3	3	3	3
4	3	3	3	3	3	3	3	3	3	3	3
5	3	3	3	3	3	2	2	3	2	2	3
6	3	IBC	7	IBC	2	3	2	2	2	2	3
7	2	2	2	2	2	2	2	2	3	2	2
8	3	3	3	2	2	2	2	2	2	2	2
9	2	3	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	3	3	2	3	3	3	3
13	2	3	3	3	3	2	3	3	3	2	3
14	3	3	3	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	3	2	2	2	2	2	2	2	2	2	2
19	2	2	2	2	1	2	2	2	2	2	2
20	2	2	2	2	2	2	2	2	1	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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