



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



Date 10/14/23

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.
10/14/2023	0	60	10.6		140		87		93		6		1			12		311		168.7	
10/14/2023	1	60	10.2		142		69		135		49		1			14		309		166.3	
10/14/2023	2	60	10.3		141		10		69		85		0			14		310		165.5	
10/14/2023	3	60	10.3		140		4		25		84		0	1		14		309	310	165.8	166.6
10/14/2023	4	60	10.4		142		14		38		63		0			13		309		164.4	
10/14/2023	5	60	10.2		142		13		31		57		0			14		310		166.2	
10/14/2023	6	60	10.4		139		4		28		85		0			13		309		162.2	
10/14/2023	7	60	10.7		142		12		40		70		0	0		15	13	309	309	164.9	164.4
10/14/2023	8	60	10.7		137		12		36		67		0			13		309		169.6	
10/14/2023	9	60	10.9		143		5		32		83		0			15		310		165.3	
10/14/2023	10	60	10.1		144		11		52		79		0			12		309		163.5	
10/14/2023	11	60	10.3		137		21		75		72		77	19		14		308	309	160.3	164.7
10/14/2023	12	60	9.7		142		11		44		74		0			13		310		164.0	
10/14/2023	13	60	10.0		142		12		45		72		0			14		309		165.5	
10/14/2023	14	60	9.8		140		9		32		72		0			14		309		165.7	
10/14/2023	15	60	9.7		142		9		32		72		0	0		13	13	310	310	166.9	165.5
10/14/2023	16	60	9.6		140		10		54		81		0			13		309		161.5	
10/14/2023	17	60	9.8		141		10		52		81		0			13		309		163.9	
10/14/2023	18	60	9.7		140		3		33		91		0			14		312		166.3	
10/14/2023	19	60	10.0		141		1		34		97		0	0		13		307	310	164.7	164.1
10/14/2023	20	60	9.6		141		4		45		90		0			14		309		161.3	
10/14/2023	21	60	9.8		141		11		48		77		0			14		310		165.5	
10/14/2023	22	60	10.0		141		28		118		76		0			14		310		167.5	
10/14/2023	23	60	10.1		138		15		73		79		0	0		14	14	308	309	168.1	165.6

Average:  
Geometric Mean Average:

Limit:

141	10
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

78
≥ 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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Date 10/14/23

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 Hr Block
10/14/2023	0	0	20.5	IF	0	IF	6	IF	0	IBF	0	IBF	0	IF		0		57		0.0		
10/14/2023	1	0	20.5	IF	0	IF	6	IF	0	IBF	0	IBF	0	IF		0		57		0.0		
10/14/2023	2	0	20.5	IF	0	IF	6	IF	0	IBF	0	IBF	0	IF		0		56		0.0		
10/14/2023	3	5	19.7	ICF	0	ICF	65	ICF	0	IBF	0	IBCF	10	ICF	2	ICF	0		56	56	0.0	0.0
10/14/2023	4	12	16.9	IBCF	64	IBCF	57	IBCF	0	IBF	0	IBCF	470	IBCF		0		56		0.0		
10/14/2023	5	0	20.5	IF	0	IF	6	IF	142	IBCF	96	IBCF	0	IF		0		55		0.0		
10/14/2023	6	0	20.5	IF	0	IF	6	IF	1	IBF	0	IBF	0	IF		0		55		0.0		
10/14/2023	7	0	20.5	IF	0	IF	6	IF	0	IBF	0	IBF	0	IF	117	IBCF	0	0	55	55	0.0	0.0
10/14/2023	8	0	20.5	IF	0	IF	6	IF	1	IBF	0	IBF	0	IF		0		56		0.0		
10/14/2023	9	0	20.4	IF	0	IF	6	IF	14	IBF	53	IBF	0	IF		0		57		0.0		
10/14/2023	10	0	20.5	IF	0	IF	6	IF	4	IBF	0	IBF	0	IF		0		59		0.0		
10/14/2023	11	0	20.5	IF	0	IF	6	IF	19	IBF	67	IBF	0	IF	0	IF	0		61	58	0.0	0.0
10/14/2023	12	0	20.5	IF	0	IF	6	IF	5	IBF	0	IBF	0	IF		0		61		0.0		
10/14/2023	13	0	20.5	IF	0	IF	6	IF	8	IBF	23	IBF	0	IF		0		61		0.0		
10/14/2023	14	0	20.5	IF	0	IF	6	IF	21	IBF	72	IBF	1	IF		0		62		0.0		
10/14/2023	15	0	20.5	IF	0	IF	6	IF	58	IBF	90	IBF	0	IF	0	IF	0	0	61	61	0.0	0.0
10/14/2023	16	0	20.5	IF	0	IF	6	IF	97	IBF	94	IBF	0	IF		0		61		0.0		
10/14/2023	17	0	20.5	IF	0	IF	6	IF	31	IBF	81	IBF	0	IF		0		60		0.0		
10/14/2023	18	0	20.5	IF	0	IF	6	IF	1	IBF	0	IBF	0	IF		0		59		0.0		
10/14/2023	19	0	20.5	IF	0	IF	6	IF	38	IBF	84	IBF	0	IF	0	IF	0		59	60	0.0	0.0
10/14/2023	20	0	20.5	IF	0	IF	6	IF	14	IBF	58	IBF	0	IF		0		59		0.0		
10/14/2023	21	0	20.5	IF	0	IF	6	IF	48	IBF	87	IBF	0	IF		0		58		0.0		
10/14/2023	22	0	20.5	IF	0	IF	6	IF	35	IBF	82	IBF	0	IF		0		58		0.0		
10/14/2023	23	0	20.5	IF	0	IF	6	IF	4	IBF	0	IBF	0	IF	0	IF	0	0	57	58	0.0	0.0

Average:  
Geometric Mean Average:

Limit:

3 IBCF
7 IBCF
≤ 150 24-HR Block Avg.
≤ 29 24-HR Geometric Mean

OR

0 IBCF
≥ 80% 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 14-Oct-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	0	1	0	0	0	0
5	1	1	1	1	1	1	1	1	1	1	1
6	3	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	0	1	1	1	1	1	1	1	1	1	0
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	0	1	1	1	1	1	0	1	1	1	0

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 B - Bad                            M - Maintenance                      P - Purge                      E - Excluded                      \* - Shutdown



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



Date 14-Oct-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	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
1	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
2	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
3	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
4	1		1		1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
5	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
6	2	BCF	23	BCF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	3
7	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
8	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
9	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
10	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
11	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
12	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
13	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
14	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
15	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
16	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
17	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
18	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
19	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
20	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
21	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
22	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
23	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1

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