



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



Date 11/14/23

Wheel Plant Wheelabrator North Andover  
Unit 1 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
11/14/2023	0	0	20.6	IF	0	IF	8	IF	1	IBF	0	IBF	0	IF		0		65		5.2		
11/14/2023	1	0	20.6	IF	0	IF	8	IF	4	IBF	0	IBF	0	IF		0		63		5.2		
11/14/2023	2	0	20.7	IF	0	IF	8	IF	13	IBF	36	IBF	0	IF		0		62		5.2		
11/14/2023	3	5	19.9	ICF	0	ICF	114	ICF	1	IBF	0	IBCF	10	ICF	3	ICF	0	61	63	5.2	5.2	
11/14/2023	4	11	17.3	IBCF	63	IBCF	67	IBCF	0	IBF	0	IBCF	529	IBCF		0		61		5.2		
11/14/2023	5	0	20.7	IF	0	IF	8	IF	139	IBCF	94	IBCF	0	IF		0		59		5.3		
11/14/2023	6	0	20.6	IF	0	IF	8	IF	0	IBF	0	IBF	0	IF		0		59		5.3		
11/14/2023	7	0	20.7	IF	0	IF	8	IF	0	IBF	0	IBF	0	IF	132	IBCF	0	0	60	60	5.2	5.3
11/14/2023	8	0	20.7	IF	0	IF	7	IF	0	IBF	0	IBF	0	IF		0		63		5.3		
11/14/2023	9	0	20.7	IF	0	IF	7	IF	0	IBF	0	IBF	0	IF		0		65		5.4		
11/14/2023	10	0	20.7	IF	0	IF	7	IF	0	IBF	0	IBF	0	IF		0		68		5.4		
11/14/2023	11	0	20.7	IF	0	IF	7	IF	7	IBF	0	IBF	0	IF	0	IF	0	70	66	5.4	5.4	
11/14/2023	12	0	20.7	IF	0	IF	7	IF	22	IBF	68	IBF	0	IF		0		71		5.4		
11/14/2023	13	0	20.7	IF	0	IF	7	IF	26	IBF	74	IBF	0	IF		0		71		5.6		
11/14/2023	14	0	20.7	IF	0	IF	7	IF	27	IBF	75	IBF	0	IF		0		74		6.4		
11/14/2023	15	0	20.7	IF	0	IF	7	IF	30	IBF	78	IBF	0	IF	0	IF	0	0	74	72	6.4	5.9
11/14/2023	16	0	20.7	IF	0	IF	7	IF	34	IBF	80	IBF	0	IF		0		75		6.5		
11/14/2023	17	0	20.7	IF	0	IF	7	IF	31	IBF	79	IBF	0	IF		0		75		6.5		
11/14/2023	18	0	20.7	IF	0	IF	7	IF	43	IBF	84	IBF	0	IF		0		75		6.5		
11/14/2023	19	0	20.7	IF	0	IF	7	IF	48	IBF	86	IBF	0	IF	0	IF	0	75	75	6.5	6.5	
11/14/2023	20	0	20.7	IF	0	IF	7	IF	58	IBF	89	IBF	0	IF		0		74		6.6		
11/14/2023	21	0	20.7	IF	0	IF	7	IF	66	IBF	90	IBF	0	IF		0		74		6.6		
11/14/2023	22	0	20.7	IF	0	IF	7	IF	72	IBF	91	IBF	0	IF		0		73		6.6		
11/14/2023	23	0	20.7	IF	0	IF	7	IF	69	IBF	90	IBF	0	IF	0	IF	0	0	73	73	6.6	6.6

Average:  
Geometric Mean Average:

Limit:

3 IBCF	9 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

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 11/14/23

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.
11/14/2023	0	60	10.3		140		9		70		88		5			13		310		167.4	
11/14/2023	1	60	9.8		138		1		52		98		6			14		310		167.5	
11/14/2023	2	60	9.9		141		2		59		96		5			14		310		167.7	
11/14/2023	3	60	9.9		139		7		67		89		5	5		14		310	310	166.5	167.3
11/14/2023	4	60	10.0		140		90		118		24		6			14		310		168.0	
11/14/2023	5	60	10.0		140		16		74		79		5			15		310		167.3	
11/14/2023	6	59	10.2		139		11		63		83		5			14		310		167.0	
11/14/2023	7	60	10.2		142		0		49		99		5	5		14	14	310	310	168.0	167.6
11/14/2023	8	60	10.4		137		0		47		99		5			13		310		167.4	
11/14/2023	9	60	10.4		139		0		37		100		4			14		310		166.8	
11/14/2023	10	60	10.1		141		0		38		100		5			15		310		167.8	
11/14/2023	11	60	10.1		137		0		45		100		5	5		14		310	310	168.0	167.5
11/14/2023	12	60	10.2		140		0		41		100		5			14		310		168.4	
11/14/2023	13	60	10.0		139		0		43		100		4			14		310		166.9	
11/14/2023	14	60	10.2		140		1		53		98		4			13		310		168.2	
11/14/2023	15	60	10.3		141		55		170		68		7	5		13	14	310	310	165.2	167.2
11/14/2023	16	60	10.4		138		9		69		86		5			13		310		166.1	
11/14/2023	17	60	10.2		141		4		56		94		6			13		310		168.1	
11/14/2023	18	60	10.3		138		1		48		98		4			12		310		167.8	
11/14/2023	19	60	10.0		142		0		42		100		5	5		14		310	310	168.0	167.5
11/14/2023	20	60	9.9		139		8		72		89		5			14		310		167.1	
11/14/2023	21	60	10.2		139		5		68		93		5			15		310		167.2	
11/14/2023	22	60	10.1		140		9		82		89		5			15		310		167.2	
11/14/2023	23	60	10.0		141		16		97		84		5	5		15	14	310	310	168.3	167.5

Average:  
Geometric Mean Average:

Limit:

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

OR

98
≥ 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
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# WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 14-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	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	IF	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	3	ICF	23	ICF	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	0	IF	0	IF	1	IF	0
23	0	IF	1	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0

**Status Flags**

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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-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.

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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	2	IBC	5	IBC	0	0	0	0	0	I	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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