



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



Date 10/1/22

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
10/1/2022	0	0	20.9	IF	34	IF	9	IF	0	IBF	0	IBF	0	IF		0		82		8.4		
10/1/2022	1	0	20.9	IF	33	IF	9	IF	0	IBF	0	IBF	0	IF		0		80		8.5		
10/1/2022	2	0	20.9	IF	33	IF	9	IF	0	IBF	0	IBF	0	IF		0		78		8.5		
10/1/2022	3	5	20.1	ICF	30	ICF	8	ICF	0	IBF	0	IBCF	1	ICF	0	ICF		75	78	8.5	8.5	
10/1/2022	4	12	17.4	IBCF	171	IBCF	69	IBCF	0	IBF	0	IBCF	520	IBCF		0		75		8.5		
10/1/2022	5	0	20.9	IF	33	IF	8	IF	121	IBCF	93	IBCF	0	IF		0		73		8.5		
10/1/2022	6	0	20.9	IF	34	IF	8	IF	0	IBF	0	IBF	0	IF		0		72		8.6		
10/1/2022	7	0	20.9	IF	35	IF	8	IF	0	IBF	0	IBF	0	IF	130	IBCF	0	0	71	73	8.6	8.5
10/1/2022	8	0	20.9	IF	35	IF	8	IF	0	IBF	0	IBF	0	IF		0		71		8.6		
10/1/2022	9	0	20.9	IF	36	IF	8	IF	0	IBF	0	IBF	0	IF		0		70		8.6		
10/1/2022	10	0	20.9	IF	37	IF	8	IF	0	IBF	0	IBF	0	IF		0		70		8.6		
10/1/2022	11	0	20.9	IF	38	IF	8	IF	0	IBF	0	IBF	0	IF	0	IF		70	70	8.6	8.6	
10/1/2022	12	0	20.9	IF	39	IF	8	IF	0	IBF	0	IBF	0	IF		0		70		8.7		
10/1/2022	13	0	20.9	IF	39	IF	8	IF	0	IBF	0	IBF	0	IF		0		70		8.7		
10/1/2022	14	0	20.9	IF	40	IF	8	IF	0	IBF	0	IBF	0	IF		0		70		8.7		
10/1/2022	15	0	20.9	IF	40	IF	8	IF	0	IBF	0	IBF	0	IF	0	IF	0	0	69	70	8.8	8.7
10/1/2022	16	0	20.9	IF	40	IF	8	IF	0	IBF	0	IBF	0	IF		0		69		8.9		
10/1/2022	17	0	20.9	IF	40	IF	8	IF	0	IBF	0	IBF	0	IF		0		69		8.8		
10/1/2022	18	0	20.9	IF	40	IF	8	IF	0	IBF	0	IBF	0	IF		0		68		8.8		
10/1/2022	19	0	20.9	IF	40	IF	8	IF	0	IBF	0	IBF	0	IF	0	IF	0	0	68	68	8.8	8.8
10/1/2022	20	0	20.9	IF	40	IF	8	IF	0	IBF	0	IBF	0	IF		0		67		8.8		
10/1/2022	21	0	20.9	IF	41	IF	8	IF	0	IBF	0	IBF	0	IF		0		68		8.8		
10/1/2022	22	0	20.9	IF	49	IF	8	IF	0	IBF	0	IBF	0	IF		0		78		8.8		
10/1/2022	23	0	20.9	IF	48	IF	8	IF	0	IBF	0	IBF	0	IF	0	IF	0	0	83	74	8.9	8.8

Average:  
Geometric Mean Average:

Limit:

43 IBCF	9 IBCF
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

0 IBCF
≥ 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 10/1/22

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
10/1/2022	0	0	20.9	IF	4	IF	7	IF	0	IBF	0	IBF	0	IF		0		55		0.0		
10/1/2022	1	0	20.9	IF	4	IF	7	IF	0	IBF	0	IBF	0	IF		0		55		0.0		
10/1/2022	2	0	20.9	IF	4	IF	6	IF	0	IBF	0	IBF	0	IF		1		54		0.0		
10/1/2022	3	5	20.1	ICF	4	ICF	6	ICF	0	IBF	0	IBCF	1	ICF	0	ICF		54	54	0.0	0.0	
10/1/2022	4	12	17.3	IBCF	84	IBCF	62	IBCF	0	IBF	0	IBCF	530	IBCF		0		54		0.0		
10/1/2022	5	0	20.9	IF	5	IF	6	IF	157	IBCF	96	IBCF	1	IF		0		54		0.0		
10/1/2022	6	0	20.9	IF	5	IF	6	IF	0	IBF	0	IBF	0	IF		0		54		0.0		
10/1/2022	7	0	20.9	IF	5	IF	6	IF	0	IBF	0	IBF	0	IF	133	IBCF	0	0	54	54	0.0	0.0
10/1/2022	8	0	20.9	IF	6	IF	6	IF	0	IBF	0	IBF	0	IF			0		55		0.0	
10/1/2022	9	0	20.9	IF	6	IF	6	IF	0	IBF	0	IBF	0	IF			0		55		0.0	
10/1/2022	10	0	20.9	IF	6	IF	6	IF	0	IBF	0	IBF	0	IF			0		56		0.0	
10/1/2022	11	0	20.9	IF	7	IF	6	IF	0	IBF	0	IBF	0	IF	0	IF		57	56	0.0	0.0	
10/1/2022	12	0	20.9	IF	7	IF	6	IF	0	IBF	0	IBF	0	IF			0		58		0.0	
10/1/2022	13	0	20.9	IF	7	IF	6	IF	0	IBF	0	IBF	0	IF			0		59		0.0	
10/1/2022	14	0	20.9	IF	7	IF	6	IF	0	IBF	0	IBF	0	IF			0		60		0.0	
10/1/2022	15	0	20.9	IF	8	IF	6	IF	0	IBF	0	IBF	0	IF	0	IF	0	0	60	59	0.0	0.0
10/1/2022	16	0	20.9	IF	8	IF	6	IF	0	IBF	0	IBF	0	IF			0		60		0.0	
10/1/2022	17	0	20.9	IF	7	IF	6	IF	0	IBF	0	IBF	0	IF			0		60		0.0	
10/1/2022	18	0	20.9	IF	7	IF	6	IF	0	IBF	0	IBF	0	IF			0		60		0.0	
10/1/2022	19	0	20.9	IF	7	IF	6	IF	0	IBF	0	IBF	0	IF	0	IF	0	0	60	60	0.0	0.0
10/1/2022	20	0	20.9	IF	8	IF	6	IF	0	IBF	0	IBF	0	IF			0		60		0.0	
10/1/2022	21	0	20.9	IF	8	IF	6	IF	0	IBF	0	IBF	0	IF			0		60		0.0	
10/1/2022	22	0	21.0	IF	7	IF	6	IF	0	IBF	0	IBF	0	IF			1		59		0.0	
10/1/2022	23	0	21.0	IF	8	IF	5	IF	0	IBF	0	IBF	0	IF	0	IF	0	0	59	59	0.0	0.0

Average:  
Geometric Mean Average:

Limit:

9 IBCF
≤ 205 24-HR Block Avg.

OR

7 IBCF
≤ 29 24-HR Geometric Mean

≥ 75%  
Removal  
Efficiency

see above
≤ 69 ppmc 4-HR Block Average

see above
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- ^ - Startup
- \* - Shutdown



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



Date 01-Oct-2022

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	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
1	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
2	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
3	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
4	0		0		0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
5	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
6	3	ICF	23	ICF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	3
7	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
8	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
9	0	IF	0	IF	0	IF	0	IF	1	IF	0	IF	0	IF	0	IF	1	IF	0	IF	0
10	0	IF	0	IF	0	IF	0	IF	0	IF	1	IF	1	IF	1	IF	1	IF	1	IF	0
11	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
12	0	IF	0	IF	0	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	0
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	0	IF	0	IF	0	IF	1	IF	0
15	0	IF	0	IF	1	IF	1	IF	1	IF	1	IF	0	IF	0	IF	0	IF	1	IF	0
16	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
17	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
18	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
19	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
20	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
21	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
22	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
23	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	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 01-Oct-2022

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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I - Invalid                      C - Calibration                      F - Offline                      T - Out of Control                      ^ - Startup  
 B - Bad                            M - Maintenance                      P - Purge                      E - Excluded                      \* - Shutdown