



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



Date 7/3/22

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.
7/3/2022	0	60	9.7		179		15		56		73		3			14		309		168.6	
7/3/2022	1	60	9.7		191		13		42		69		2			14		309		167.0	
7/3/2022	2	60	9.6		191		8		34		77		2			14		310		166.1	
7/3/2022	3	60	9.5		199		13		47		72		2	2		13		309	309	167.9	167.4
7/3/2022	4	60	9.8		186		15		46		68		3			13		309		165.4	
7/3/2022	5	60	9.2		175		13		48		74		3			13		309		166.2	
7/3/2022	6	60	9.4		184		13		45		71		3			13		310		165.3	
7/3/2022	7	60	9.4		176		11		44		76		3	3		13	14	309	309	164.8	165.4
7/3/2022	8	60	9.5		171		9		41		78		3			14		309		163.6	
7/3/2022	9	60	9.7		180		17		45		63		3			14		310		162.7	
7/3/2022	10	60	9.6		183		20		59		66		3			14		309		165.3	
7/3/2022	11	60	9.6		192		19		57		67		2	3		13		309	309	165.8	164.3
7/3/2022	12	60	9.6		174		15		43		66		3			14		309		164.7	
7/3/2022	13	60	9.5		187		22		55		61		2			14		310		168.3	
7/3/2022	14	60	9.7		183		17		56		69		3			14		309		163.9	
7/3/2022	15	60	9.7		187		14		48		70		2	2		14	14	310	309	162.8	164.9
7/3/2022	16	60	9.6		174		15		54		72		3			14		309		164.2	
7/3/2022	17	60	9.3		173		20		71		72		3			14		310		163.9	
7/3/2022	18	60	9.7		188		25		74		66		3			14		309		166.7	
7/3/2022	19	60	9.4		184		19		60		69		3	3		14		310	309	167.7	165.6
7/3/2022	20	60	9.8		193		20		50		60		2			14		309		163.9	
7/3/2022	21	60	9.7		175		16		50		68		3			14		310		163.2	
7/3/2022	22	60	9.7		186		14		42		66		3			14		310		166.0	
7/3/2022	23	60	10.0		190		22		51		58		5	3		14	14	309	309	165.4	164.6

Average:  
Geometric Mean Average:

Limit:

183	15
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

69
≥ 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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Date 7/3/22

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
7/3/2022	0	0	21.0	IF	9	IF	4	IF	745	IBF	99	IBF	0	IF		0		128		0.0		
7/3/2022	1	0	21.0	IF	8	IF	4	IF	808	IBF	99	IBF	0	IF		0		125		0.0		
7/3/2022	2	0	21.0	IF	7	IF	5	IF	866	IBF	99	IBF	0	IF		0		122		0.0		
7/3/2022	3	5	20.2	ICF	6	ICF	5	ICF	920	IBF	100	IBCF	1	ICF	0	ICF		118	123	0.0	0.0	
7/3/2022	4	12	17.4	IBCF	90	IBCF	59	IBCF	978	IBF	94	IBCF	545	IBCF		0		118		0.0		
7/3/2022	5	0	21.0	IF	7	IF	5	IF	1058	IBCF	100	IBCF	0	IF		0		115		0.0		
7/3/2022	6	0	21.0	IF	7	IF	5	IF	1101	IBFT	100	IBFT	0	IF		0		112		0.0		
7/3/2022	7	0	21.0	IF	6	IF	5	IF	1150	IBFT	100	IBFT	0	IF	136	IBCF	0	0	110	114	0.0	0.0
7/3/2022	8	0	21.0	IF	7	IF	5	IF	156	IBCMF	97	IBCMF	0	IF		0		109		0.0		
7/3/2022	9	0	21.0	IF	6	IF	5	IF	-94	IBF	0	IBF	0	IF		0		107		0.0		
7/3/2022	10	0	21.0	IF	6	IF	5	IF	-102	IBF	0	IBF	0	IF		0		106		0.0		
7/3/2022	11	0	21.0	IF	4	IF	6	IF	-100	IBF	0	IBF	0	IF	0	IF		104	106	0.0	0.0	
7/3/2022	12	0	21.0	IF	3	IF	6	IF	-98	IBF	0	IBF	0	IF		0		102		0.0		
7/3/2022	13	0	21.0	IF	3	IF	6	IF	-98	IBF	0	IBF	0	IF		0		101		0.0		
7/3/2022	14	0	20.9	IF	3	IF	6	IF	-101	IBF	0	IBF	0	IF		0		100		0.0		
7/3/2022	15	0	20.9	IF	2	IF	6	IF	-101	IBF	0	IBF	0	IF	0	IF	0	0	100	101	0.0	0.0
7/3/2022	16	0	20.9	IF	3	IF	6	IF	-98	IBF	0	IBF	0	IF		0		100		0.0		
7/3/2022	17	0	20.9	IF	3	IF	6	IF	-94	IBF	0	IBF	0	IF		0		99		0.0		
7/3/2022	18	0	20.9	IF	3	IF	5	IF	-90	IBF	0	IBF	0	IF		0		101		0.8		
7/3/2022	19	0	20.9	IF	3	IF	5	IF	-85	IBF	0	IBF	0	IF	0	IF		106	101	0.0	0.2	
7/3/2022	20	0	20.9	IF	4	IF	5	IF	-81	IBF	0	IBF	0	IF		0		103		0.0		
7/3/2022	21	0	21.0	IF	4	IF	5	IF	-78	IBF	0	IBF	0	IF		0		99		0.0		
7/3/2022	22	0	21.0	IF	5	IF	6	IF	-81	IBF	0	IBF	0	IF		0		96		0.0		
7/3/2022	23	0	20.9	IF	5	IF	6	IF	-87	IBF	0	IBF	0	IF	0	IF	0	0	94	98	0.0	0.0

Average:  
Geometric Mean Average:

Limit:

8 IBCF	6 IBCF	OR	0 IBCMF
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

see above	see above	see above
≤ 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 03-Jul-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	2	2	2	2	2	2	2	2	2	2	2
1	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2
3	2	2	2	2	2	2	2	2	2	2	2
4	2	2	2	2	2	2	2	2	2	2	2
5	2	2	2	2	2	2	2	2	2	2	2
6	2	IC	6	IC	2	2	2	2	2	2	3
7	2	2	2	2	2	2	2	2	2	2	2
8	2	2	2	2	2	2	2	2	2	2	2
9	2	2	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	2	2	2	2	2	2	2
13	2	2	2	2	2	2	2	2	2	2	2
14	2	2	2	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	2	2	2	2	2	2	2	2	2	2	2
19	2	2	2	2	2	2	2	2	2	2	2
20	2	2	2	2	2	2	2	2	2	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

**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 03-Jul-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

**Status Flags**

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