



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



Date 7/26/22

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
7/26/2022	0	0	20.9	IF	70	IF	9	IF	-48818	IBF	0	IBF	0	IF			0		87		0.0	
7/26/2022	1	0	20.9	IF	69	IF	10	IF	6989	IBF	100	IBF	0	IF			0		86		0.0	
7/26/2022	2	0	20.9	IF	68	IF	10	IF	5942	IBF	100	IBF	0	IF			0		83		0.0	
7/26/2022	3	5	20.1	ICF	62	ICF	10	ICF	6092	IBF	100	IBCF	1	ICF	0	ICF	0		79	84	0.0	0.0
7/26/2022	4	12	17.3	IBCF	277	IBCF	68	IBCF	1114	IBF	94	IBCF	546	IBCF			0		79		0.0	
7/26/2022	5	0	20.9	IF	70	IF	10	IF	175	IBCF	94	IBCF	0	IF			0		78		0.0	
7/26/2022	6	0	20.9	IF	69	IF	10	IF	2936	IBF	100	IBF	0	IF			0		76		0.0	
7/26/2022	7	0	20.9	IF	69	IF	10	IF	2549	IBF	100	IBF	0	IF	136	IBCF	0	0	75	77	0.0	0.0
7/26/2022	8	0	20.9	IF	68	IF	8	IF	-10419	IBF	0	IBF	0	IF			0		75		0.0	
7/26/2022	9	10	17.7	IF	448	IF	18	IF	16	IBF	0	IBF	53	IF			0		92		0.0	
7/26/2022	10	60	17.5		436		21		15		0		15				10		104		0.1	
7/26/2022	11	60	16.1		337		15		11		0		6	10			13		121	113	12.8	6.5
7/26/2022	12	60	12.2		190		7		7		0		1				13		173		53.4	
7/26/2022	13	60	11.6		172		6		7		20		0				13		211		60.8	
7/26/2022	14	60	7.4		121		66		122		46		616				13		267		106.8	
7/26/2022	15	60	8.4		190		6		65		90		9	157			13	13	310	240	165.2	96.5
7/26/2022	16	60	8.8		190		8		62		87		6				13		310		163.8	
7/26/2022	17	60	8.8		192		20		101		80		4				13		310		165.9	
7/26/2022	18	60	9.1		189		17		74		77		4				13		309		165.3	
7/26/2022	19	60	8.8		187		9		56		84		4	5			13		310	310	166.9	165.5
7/26/2022	20	60	9.0		184		9		50		83		3				13		309		166.7	
7/26/2022	21	60	9.3		189		16		70		77		3				13		309		165.3	
7/26/2022	22	60	9.8		197		21		82		75		4				13		310		165.0	
7/26/2022	23	60	9.8		192		21		96		78		4	4			13	13	309	310	165.8	165.7

Average:  
Geometric Mean Average:

Limit:

212	14
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

67
≥ 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 7/26/22

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.
7/26/2022	0	60	11.1		171		1		29		97		3			13		301		162.4	
7/26/2022	1	60	11.1		178		6		45		87		3			13		306		161.6	
7/26/2022	2	60	10.8		173		13		62		78		3			13		307		164.2	
7/26/2022	3	60	11.0		179		7		57		88		2	3		14		305	305	162.9	162.8
7/26/2022	4	60	10.9		172		11		45		77		3			11		307		163.6	
7/26/2022	5	60	11.0		174		3		28		89		3			12		307		161.0	
7/26/2022	6	60	10.6		174		4		28		85		2			13		310		163.6	
7/26/2022	7	60	10.5		170		5		28		83		2	3		13	13	313	309	165.7	163.5
7/26/2022	8	60	10.9		180		7		27		74		3			13		311		166.4	
7/26/2022	9	60	11.1		178		14		46		70		2			13		310		165.5	
7/26/2022	10	60	11.3		152		15		52		71		2			13		310		166.6	
7/26/2022	11	60	11.4		172		10		42		76		2	2		13		306	309	167.0	166.4
7/26/2022	12	60	11.5		191		3		24		87		2			13		306		165.1	
7/26/2022	13	60	11.3		195		6		29		80		2			13		308		164.8	
7/26/2022	14	60	10.7		150		3		17		85		3			13		314		165.0	
7/26/2022	15	60	10.9		177		4		17		79		3	2		13	13	316	311	165.7	165.1
7/26/2022	16	60	10.8		180		18		66		72		3			14		319		164.7	
7/26/2022	17	60	10.6		184		22		56		61		2			14		320		166.4	
7/26/2022	18	60	10.7		180		16		36		57		2			13		321		167.1	
7/26/2022	19	60	10.8		178		6		21		70		2	2		13		322	320	167.2	166.3
7/26/2022	20	60	10.8		179		9		32		73		2			13		312		168.0	
7/26/2022	21	60	11.1		176		5		39		87		2			13		309		167.1	
7/26/2022	22	60	10.9		178		7		40		82		1			13		301		167.6	
7/26/2022	23	60	10.0		183		19		44		57		3	2		13	13	315	309	165.9	167.1

Average:  
Geometric Mean Average:

Limit:

176	7
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

80
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≥ 12 8-HR. Block Average

lb/hr

see above
≤ 345 4-HR Block Average

°F

see above
≤ 173 4-HR Block Average

klb/hr

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



Date 26-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	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	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		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	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 26-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	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	1	IBC	5	IBC	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	0	0	0	1	0	0	0
20	1	1	0	0	0	0	0	0	0	0	0
21	0	1	1	1	0	1	1	0	0	1	0
22	0	1	1	1	1	1	0	0	0	1	0
23	0	0	0	0	0	0	0	0	0	0	0

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