



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



Date 11/10/22

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.
11/10/2022	0	60	10.6		198		11		38		71		4			13		309		164.9	
11/10/2022	1	60	10.4		199		10		33		71		6			13		310		166.3	
11/10/2022	2	60	10.2		196		11		42		75		5			14		309		167.5	
11/10/2022	3	60	10.4		192		16		46		66		6	5		14		309	309	166.0	166.2
11/10/2022	4	60	10.3		200		11		42		75		5			13		310		165.2	
11/10/2022	5	60	10.6		198		10		37		72		5			13		309		166.0	
11/10/2022	6	60	10.5		197		11		44		76		5			13		310		165.2	
11/10/2022	7	60	10.7		195		12		36		66		4	5		14	14	310	310	167.6	166.0
11/10/2022	8	60	10.9		190		7		28		74		4			14		306		165.2	
11/10/2022	9	60	10.9		192		17		40		56		4			13		308		166.1	
11/10/2022	10	60	10.8		190		7		29		76		7			14		315		165.6	
11/10/2022	11	60	11.1		180		5		20		78		4	5		13		309	309	165.0	165.5
11/10/2022	12	60	11.0		193		4		21		83		5			13		310		165.7	
11/10/2022	13	60	10.6		198		8		44		81		7			14		310		165.9	
11/10/2022	14	60	10.6		188		8		49		84		8			13		300		167.5	
11/10/2022	15	60	10.2		189		9		55		84		6	6		13	14	298	304	165.2	166.1
11/10/2022	16	60	10.3		187		2		36		93		6			13		301		166.8	
11/10/2022	17	60	10.2		182		3		37		92		6			14		309		165.4	
11/10/2022	18	60	10.0		177		2		31		95		6			13		309		167.2	
11/10/2022	19	60	10.2		191		1		27		95		5	6		14		310	307	163.6	165.7
11/10/2022	20	60	10.3		195		3		28		88		5			14		310		165.8	
11/10/2022	21	60	10.3		194		4		29		86		5			13		309		165.0	
11/10/2022	22	60	10.3		189		5		30		85		5			13		310		165.5	
11/10/2022	23	60	10.3		187		9		39		77		5	5		13	13	308	309	165.7	165.5

Average: Geometric Mean Average:	192	6	<b>OR</b>	82	see above	see above	see above	see above			
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 4-HR Block Average	ppmc	≥ 12 8-HR. Block Average	lb/hr	≤ 345 °F 4-HR Block Average	≤ 173 4-HR Block Average	klb/hr

**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 11/10/22

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.
11/10/2022	0	60	10.5		197		16		35		54		3			13		310		166.3	
11/10/2022	1	60	10.5		194		19		29		35		3			13		310		167.1	
11/10/2022	2	60	10.5		196		11		20		45		3			14		310		166.7	
11/10/2022	3	60	10.4		194		16		34		52		4	3		15		310	310	166.6	166.7
11/10/2022	4	60	10.4		192		9		26		65		3			13		310		166.9	
11/10/2022	5	60	10.4		189		11		28		59		2			13		310		166.9	
11/10/2022	6	60	10.5		189		14		32		56		2			13		310		166.3	
11/10/2022	7	60	10.6		191		12		22		47		1	2		13	13	310	310	164.7	166.2
11/10/2022	8	60	10.7		172		5		7		33		0			14		310		165.4	
11/10/2022	9	60	10.6		165		6		18		67		4			14		310		167.9	
11/10/2022	10	60	10.3		180		3		11		70		1			14		309		163.5	
11/10/2022	11	60	10.0		191		3		12		73		1	2		18		310	310	166.6	165.8
11/10/2022	12	60	9.7		181		3		14		77		2			13		310		167.0	
11/10/2022	13	60	9.7		196		5		24		78		0			14		310		166.5	
11/10/2022	14	60	9.4		189		13		40		67		1			13		310		167.1	
11/10/2022	15	60	9.5		182		6		24		73		1	1		13	14	310	310	166.4	166.7
11/10/2022	16	60	9.3		189		4		21		81		2			13		310		166.9	
11/10/2022	17	60	9.4		189		4		19		80		2			13		311		168.0	
11/10/2022	18	60	9.5		190		3		17		80		7			13		310		166.2	
11/10/2022	19	60	9.8		187		3		16		79		1	3		13		310	310	165.2	166.6
11/10/2022	20	60	9.9		186		5		19		75		2			14		310		166.2	
11/10/2022	21	60	9.9		187		6		26		76		1			13		310		167.1	
11/10/2022	22	60	10.1		188		9		30		70		2			14		310		166.4	
11/10/2022	23	60	10.1		188		12		35		66		1	1		13	13	310	310	166.2	166.5

Average:  
Geometric Mean Average:

Limit:

188	7
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

67
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≥ 12 8-HR. Block Average

lb/hr

see above
≤ 345 °F 4-HR Block Average

°F

see above
≤ 173 4-HR Block Average

klb/hr

**Status Flags**

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



Date 10-Nov-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	1	1	2	2	2
6	2	IC	6	IC	1	1	1	1	2	1	2
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 10-Nov-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	2	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	2	IBC	5	IBC	1	1	1	1	1	1	2
7	1	1	1	1	1	1	1	2	2	1	1
8	2	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	2	2	2	2	2	1	2	2
11	1	1	1	1	1	1	2	1	1	1	1
12	2	1	1	2	2	2	2	2	1	2	1
13	2	2	2	2	2	1	1	1	1	1	1
14	1	1	2	2	2	2	2	2	2	2	1
15	1	1	2	1	2	1	1	2	1	1	1
16	2	1	1	1	1	2	2	2	2	2	2
17	2	1	2	2	1	1	1	1	1	1	1
18	1	1	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	1	2	2	2	2	2	2	2	2	2
22	2	2	1	1	1	2	2	2	2	2	1
23	2	1	2	1	1	1	1	1	1	1	1

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