



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



Date 7/1/22

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
7/1/2022	0	60	10.0		195		14		50		71		4		15		309		167.4	
7/1/2022	1	60	10.3		188		22		52		58		3		15		309		168.8	
7/1/2022	2	60	10.4		196		17		51		66		3		16		309		164.7	
7/1/2022	3	60	10.1		196		21		75		72		3	3	15		310	309	167.4	167.1
7/1/2022	4	60	10.1		198		30		124		75		4		15		309		166.2	
7/1/2022	5	60	10.3		198		15		46		67		3		15		309		165.7	
7/1/2022	6	60	10.5		192		16		48		66		3		15		309		165.4	
7/1/2022	7	60	10.5		189		14		49		71		4	4	15	15	310	309	163.3	165.1
7/1/2022	8	60	10.3		192		13		64		80		4		14		309		169.3	
7/1/2022	9	60	10.5		197		14		61	IBM	77	IBM	3		14		309		167.8	
7/1/2022	10	60	10.5		196		15		82	IBCM	81	IBCM	4		14		310		167.3	
7/1/2022	11	60	10.3		195		8		42		82		3	4	15		309	309	168.1	168.1
7/1/2022	12	60	10.3		199		14		81		83		9		14		309		170.8	
7/1/2022	13	60	10.7		195		12		54		78		5		15		309		168.0	
7/1/2022	14	60	10.4		198		7		39		83		4		15		310		166.9	
7/1/2022	15	60	10.4		188		11		51		79		5	6	15	14	309	309	168.3	168.5
7/1/2022	16	60	10.5		183		15		69		79		7		15		309		168.6	
7/1/2022	17	60	10.7		194		17		59		71		7		16		309		165.9	
7/1/2022	18	60	10.5		193		13		50		75		5		15		309		169.2	
7/1/2022	19	60	10.2		189		19		64		71		4	5	16		309	309	172.8	169.1
7/1/2022	20	60	10.6		192		15		49		71		3		15		309		166.6	
7/1/2022	21	60	10.3		185		11		44		75		2		16		309		167.9	
7/1/2022	22	60	10.2		193		15		47		69		2		15		309		168.6	
7/1/2022	23	60	10.1		189		19		50		63		3	3	15	15	309	309	168.4	167.9

Average:  
Geometric Mean Average:

Limit:

193	14
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

74
≥ 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 7/1/22

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
7/1/2022	0	60	10.1		191		5		4		0		1		14		316		165.7	
7/1/2022	1	60	10.2		192		7		9		23		1		13		314		167.3	
7/1/2022	2	60	10.2		194		5		8		33		2		14		313		164.3	
7/1/2022	3	60	10.3		193		19		11		0		2	2	14		318	315	166.4	165.9
7/1/2022	4	60	9.9		196		31		35		12		3		14		317		166.3	
7/1/2022	5	60	10.0		186		16		13		0		2		14		316		167.9	
7/1/2022	6	60	10.7		185		8		11		29		2		13		302		165.3	
7/1/2022	7	60	10.4		188		13		11		0		3	2	14	14	302	310	167.2	166.7
7/1/2022	8	60	10.5		188		10		24		58		3		14		314		167.3	
7/1/2022	9	60	10.4		192		8		25	IBM	68	IBM	3		15		317		167.9	
7/1/2022	10	60	10.4		184		5		27	IBCM	80	IBCM	3		13		317		167.3	
7/1/2022	11	60	10.1		175		4		25		85		2	3	13		320	317	169.3	167.9
7/1/2022	12	60	10.2		181		5		58		91		7		15		311		168.2	
7/1/2022	13	60	10.2		161		1		27		95		2		13		301		167.4	
7/1/2022	14	60	10.1		173		4		30		86		3		12		311		168.6	
7/1/2022	15	60	10.1		177		3		27		89		3	4	11	13	314	309	167.6	167.9
7/1/2022	16	60	9.9		173		6		33		82		3		12		316		168.7	
7/1/2022	17	60	10.1		163		9		41		79		6		12		314		169.3	
7/1/2022	18	60	10.3		152		10		41		75		3		12		316		168.5	
7/1/2022	19	60	10.1		160		7		34		79		1	3	14		317	316	169.6	169.0
7/1/2022	20	60	10.2		171		4		34		88		1		12		308		167.5	
7/1/2022	21	60	10.1		172		9		32		73		1		11		312		169.3	
7/1/2022	22	60	9.9		189		10		37		72		1		13		315		172.4	
7/1/2022	23	60	10.0		184		12		39		70		1	1	13	13	312	312	170.2	169.8

Average:  
Geometric Mean Average:

Limit:

180	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

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



Date 01-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	7	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 01-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	2	2	2	2	2	1	2	2
5	1	1	1	1	1	1	1	1	1	1	1
6	2	IBC	6	IBC	1	1	1	1	1	1	2
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	2	1	1	2	1	2	1	1
12	1	2	2	1	2	2	1	2	1	2	2
13	2	1	1	1	2	1	1	1	1	1	1
14	1	1	1	1	1	1	1	1	1	1	1
15	1	1	1	1	1	2	1	1	1	2	1
16	1	1	1	1	1	1	1	2	1	1	1
17	2	1	1	1	1	1	2	2	1	1	1
18	2	1	2	2	2	2	1	1	1	2	2
19	1	1	1	1	1	2	2	2	1	2	1
20	1	2	1	1	1	1	1	2	1	1	1
21	1	2	1	2	1	1	2	2	2	1	1
22	1	2	2	1	1	1	1	2	2	1	1
23	2	1	2	2	1	2	2	1	1	2	2

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