



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



Date 6/9/22

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.
6/9/2022	0	60	10.1		186		5		48		89		3			13		304		165.9	
6/9/2022	1	60	10.1		183		10		66		85		3			13		304		165.9	
6/9/2022	2	60	10.2		194		15		68		78		3			13		304		165.4	
6/9/2022	3	60	10.1		196		12		60		80		4	3		15		304	304	166.5	165.9
6/9/2022	4	60	9.9		195		10		54		81		4			13		304		167.7	
6/9/2022	5	60	9.9		196		14		47		70		3			13		305		169.9	
6/9/2022	6	60	10.1		194		17		65		74		5			13		304		164.3	
6/9/2022	7	60	9.8		191		7		38		81		5	4		13	14	304	304	165.8	166.9
6/9/2022	8	60	9.7		193		14		65		78		6			13		304		166.4	
6/9/2022	9	60	10.1		188		15		55		73		4			14		304		163.1	
6/9/2022	10	60	9.9		188		21		76		72		4			13		305		164.6	
6/9/2022	11	60	9.7		192		18		73		75		5	5		13		305	304	166.0	165.0
6/9/2022	12	60	9.9		195		22		65		67		4			13		304		166.1	
6/9/2022	13	60	9.9		187		17		46		62		6			14		304		164.9	
6/9/2022	14	60	10.0		193		16		41		62		4			14		304		164.6	
6/9/2022	15	60	9.8		197		19		52		64		5	5		13	13	305	304	166.9	165.6
6/9/2022	16	60	10.0		188		20		53		62		4			16		304		164.3	
6/9/2022	17	60	10.1		187		17		61		72		4			13		305		163.5	
6/9/2022	18	60	10.1		196		21		64		68		3			13		304		165.2	
6/9/2022	19	60	10.0		195		22		60		64		4	4		14		304	304	167.5	165.1
6/9/2022	20	60	9.9		197		22		79		72		4			14		305		165.7	
6/9/2022	21	60	9.7		193		20		82		76		4			13		304		168.6	
6/9/2022	22	60	9.9		198		20		71		72		4			14		304		165.3	
6/9/2022	23	60	9.9		191		25		92		73		3	4		13	14	304	304	165.4	166.3

Average:  
Geometric Mean Average:

Limit:

192	16
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

74
≥ 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

see above
≤ 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



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Date 6/9/22

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.
6/9/2022	0	60	10.2		196		10		38		74		1			14		312		166.6	
6/9/2022	1	60	10.2		196		12		39		69		1			14		315		166.8	
6/9/2022	2	60	10.2		193		12		36		66		1			14		317		168.2	
6/9/2022	3	60	10.1		195		10		39		75		0	I		16		313	314	167.4	167.3
6/9/2022	4	60	10.2		190		8		37		78		1			14		309		168.7	
6/9/2022	5	60	10.2		198		13		60		78		0			14		301		168.4	
6/9/2022	6	60	10.2		189		23		104		78		1			14		300		162.2	
6/9/2022	7	60	10.1		183		2		18		86		1	I		14	14	298	302	164.7	166.0
6/9/2022	8	60	10.0		197		7		25		73		1			14		307		163.9	
6/9/2022	9	60	10.1		195		14		34		60		1			14		310		165.6	
6/9/2022	10	60	10.1		194		13		29		53		1			13		310		165.5	
6/9/2022	11	60	10.0		193		14		33		58		1	I		14		312	310	165.4	165.1
6/9/2022	12	60	9.7		195		11		22		52		1			14		313		166.1	
6/9/2022	13	60	10.0		196		11		22		47		1			14		307		165.7	
6/9/2022	14	60	10.0		193		27		45		39		1			14		303		167.4	
6/9/2022	15	60	9.6		198		11		29		63		1	I		14	14	308	308	164.2	165.8
6/9/2022	16	60	9.8		196		25		37		33		1			16		312		166.0	
6/9/2022	17	60	9.9		198		19		26		28		1			14		312		164.7	
6/9/2022	18	60	9.9		198		27		35		22		1			14		314		167.0	
6/9/2022	19	60	10.2		197		55		54		0		0	I		14		317	314	166.4	166.0
6/9/2022	20	60	9.7		198		35		55		36		0			14		319		168.3	
6/9/2022	21	60	9.9		195		22		57		61		0			14		312		168.4	
6/9/2022	22	60	10.1		198		23		60		62		0			14		309		167.0	
6/9/2022	23	60	10.2		198		27		62		56		0	0		14	14	305	311	167.5	167.8

Average:  
Geometric Mean Average:

Limit:

195	15
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

61
≥ 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

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



Date 09-Jun-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 09-Jun-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	2	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	0	1	1	1	0
17	0	0	1	1	0	0	1	1	1	0	0
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

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