



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



Date 7/7/22

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.
7/7/2022	0	60	9.7		182		3		35		92		3			13		309		167.9	
7/7/2022	1	60	10.0		182		7		41		83		3			13		309		165.7	
7/7/2022	2	60	9.9		193		6		41		85		3			13		309		167.6	
7/7/2022	3	60	9.8		170		6		40		85		4	3		13		309	309	164.4	166.4
7/7/2022	4	60	9.8		190		10		48		79		3			13		309		168.4	
7/7/2022	5	60	9.9		196		14		57		75		5			13		309		166.9	
7/7/2022	6	60	9.9		184		15		55		72		5			13		310		166.9	
7/7/2022	7	60	10.0		187		8		47		82		4	4		13	13	309	309	166.5	167.2
7/7/2022	8	60	10.0		194		6		39		85		3			13		309		165.5	
7/7/2022	9	60	10.1		188		4		31		88		3			13		309		165.5	
7/7/2022	10	60	9.8		187		4		35		88		4			13		309		166.7	
7/7/2022	11	60	9.9		188		7		37		80		4	4		13		309	309	167.1	166.2
7/7/2022	12	60	10.2		191		6		39		85		5			13		309		158.0	
7/7/2022	13	60	10.2		175		4		29		85		9			13		310		155.1	
7/7/2022	14	60	9.9		189		3		25		90		5			13		310		162.0	
7/7/2022	15	60	9.7		187		18		85		78		6	6		13	13	309	309	163.4	159.6
7/7/2022	16	60	9.9		193		7		35		80		5			13		309		163.6	
7/7/2022	17	60	9.8		193		9		40		77		3			13		309		166.6	
7/7/2022	18	60	9.8		190		12		45		74		3			13		310		165.5	
7/7/2022	19	60	9.9		193		7		33		80		3	4		13		309	309	164.5	165.0
7/7/2022	20	60	9.9		189		12		38		67		3			13		309		166.0	
7/7/2022	21	60	9.8		194		11		34		67		3			13		309		166.8	
7/7/2022	22	60	9.9		190		11		39		70		3			13		309		165.7	
7/7/2022	23	60	9.9		192		15		40		61		4	3		13	13	309	309	165.3	165.9

Average: Geometric Mean Average:	188	8	<b>OR</b>	81	see above	see above	see above	see above
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 ppmc 4-HR Block Average	≤ 12 lb/hr 8-HR. Block Average	≤ 345 °F 4-HR Block Average	≤ 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 7/7/22

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.
7/7/2022	0	60	10.4		184		9		43		79		4			13		320		169.7	
7/7/2022	1	60	10.5		187		5		50		90		3			13		314		167.1	
7/7/2022	2	60	10.6		187		4		35		88		4			13		315		166.0	
7/7/2022	3	60	10.3		182		7		45		85		4	4		14		321	318	172.7	168.9
7/7/2022	4	60	9.7		148		8		45		82		149			13		308		166.3	
7/7/2022	5	60	9.5		170		6		48		87		5			14		304		175.7	
7/7/2022	6	60	10.7		196		5		49		90		7			14		292		155.5	
7/7/2022	7	60	10.1		206		9		34		75		1	40		14	13	316	305	171.4	167.2
7/7/2022	8	60	10.1		185		6		35		83		21			14		312		169.2	
7/7/2022	9	60	10.0		169		6		35		84		6			14		311		165.1	
7/7/2022	10	60	10.1		170		6		37		83		4			14		313		165.4	
7/7/2022	11	60	10.3		182		1		27		96		3	8		14		297	309	158.8	164.6
7/7/2022	12	60	10.1		188		10		41		76		3			13		315		164.2	
7/7/2022	13	60	10.3		190		4		23		81		2			14		319		162.2	
7/7/2022	14	60	10.4		192		0		24		98		3			13		309		156.9	
7/7/2022	15	60	10.0		186		12		44		73		4	3		13	14	314	314	165.3	162.1
7/7/2022	16	60	10.3		187		11		32		65		14			13		319		167.1	
7/7/2022	17	60	10.6		177		11		40		72		61			13		316		157.3	
7/7/2022	18	60	10.3		181		4		32		89		2			13		306		158.1	
7/7/2022	19	60	10.2		187		8		35		76		2	20		13		309	313	164.8	161.8
7/7/2022	20	60	10.3		188		8		30		72		2			14		313		166.0	
7/7/2022	21	60	10.4		189		10		54		82		2			13		306		165.2	
7/7/2022	22	60	10.4		191		11		61		82		2			13		303		165.1	
7/7/2022	23	60	10.4		193		11		54		80		2	2		13	13	304	306	163.7	165.0

Average: Geometric Mean Average:	<b>184</b>	<b>6</b>	<b>OR</b>	<b>84</b>	see above	see above	see above	
Limit:	<b>≤ 205</b> 24-HR Block Avg.	<b>≤ 29</b> 24-HR Geometric Mean		<b>≥ 75%</b> Removal Efficiency	<b>≤ 69</b> ppmc 4-HR Block Average	<b>≤ 12</b> lb/hr 8-HR. Block Average	<b>≤ 345</b> °F 4-HR Block Average	<b>≤ 173</b> klb/hr 4-HR Block Average

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



Date 07-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	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	IC	5	IC	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	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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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 07-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	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	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

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