



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



Date 3/23/22

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.
3/23/2022	0	60	10.0		184		24		108		78		5			15		304		167.2	
3/23/2022	1	60	10.0		180		21		94		77		4			12		304		167.3	
3/23/2022	2	60	10.2		189		22		69		68		3			14		304		166.4	
3/23/2022	3	60	10.1		184		18		68		73		4	4		13		305	304	165.3	166.6
3/23/2022	4	60	10.2		194		22		70		68		3			14		304		165.2	
3/23/2022	5	60	10.0		192		20		71		72		4			14		304		165.5	
3/23/2022	6	60	10.1		187		18		74		76		4			14		304		165.3	
3/23/2022	7	60	10.2		179		17		60		72		4	4		13	14	305	304	167.4	165.9
3/23/2022	8	60	10.3		190		18		53		66		4			14		305		165.2	
3/23/2022	9	60	10.6		180		37		70		47		3			13		304		165.6	
3/23/2022	10	60	10.6		189		8		43		81		4			14		305		163.7	
3/23/2022	11	60	10.5		175		8		43		82		3	3		13		304	304	163.5	164.5
3/23/2022	12	60	10.3		190		4		41		90		5			14		304		167.6	
3/23/2022	13	60	10.3		193		9		52		82		5			14		304		164.5	
3/23/2022	14	60	10.2		190		16		58		72		5			14		305		165.2	
3/23/2022	15	60	10.3		191		23		79		71		4	5		13	14	304	304	165.6	165.7
3/23/2022	16	60	10.2		187		15		59		74		5			13		305		164.4	
3/23/2022	17	60	10.1		194		9		41		78		5			15		304		167.0	
3/23/2022	18	60	10.3		194		12		48		75		5			13		305		168.0	
3/23/2022	19	60	10.7		184		35		130		73		3	4		14		304	304	167.0	166.6
3/23/2022	20	60	10.4		182		26		95		73		4			13		305		164.7	
3/23/2022	21	60	10.3		181		18		68		74		3			15		304		166.1	
3/23/2022	22	60	10.2		191		18		60		70		4			13		305		165.8	
3/23/2022	23	60	10.4		189		20		63		69		4	4		13	14	305	305	163.5	165.0

Average:  
Geometric Mean Average:

Limit:

187	16
≤ 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 3/23/22

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.
3/23/2022	0	60	9.5		194		18		74		75		2			14		303		166.9	
3/23/2022	1	60	9.6		184		12		52		78		1			15		303		165.9	
3/23/2022	2	60	9.5		181		14		57		75		2			14		305		167.0	
3/23/2022	3	60	9.5		187		14		58		77		2	2		15		304	304	166.8	166.7
3/23/2022	4	60	9.6		175		7		48		86		3			14		303		166.1	
3/23/2022	5	60	9.7		181		13		56		77		2			14		302		166.5	
3/23/2022	6	60	9.9		175		12		47		74		2			14		312		166.3	
3/23/2022	7	60	9.7		170		15		65		77		2	2		14	14	305	306	166.4	166.3
3/23/2022	8	60	10.0		160		29		97		71		1			14		303		168.2	
3/23/2022	9	60	10.1		168		1		57		98		2			14		308		163.5	
3/23/2022	10	60	9.7		171		0		47		100		1			14		314		166.8	
3/23/2022	11	60	9.4		181		0		33		99		1	1		14		306	308	166.3	166.2
3/23/2022	12	60	9.6		177		0		24		99		2			14		307		166.9	
3/23/2022	13	60	9.4		189		0		57		100		2			14		301		166.3	
3/23/2022	14	60	9.3		188		0		70		100		2			14		303		166.5	
3/23/2022	15	60	9.3		185		0		44		99		1	2		14	14	301	303	167.6	166.8
3/23/2022	16	60	9.6		185		1		48		98		2			14		310		165.5	
3/23/2022	17	60	9.5		192		0		24		99		1			14		310		167.3	
3/23/2022	18	60	9.4		193		1		37		96		1			14		310		166.4	
3/23/2022	19	60	9.4		188		0		22		98		1	1		14		307	309	167.8	166.8
3/23/2022	20	60	9.5		189		1		25		97		1			14		311		166.6	
3/23/2022	21	60	9.5		188		14		82		83		1			14		310		166.1	
3/23/2022	22	60	9.7		190		10		50		79		1			14		305		166.2	
3/23/2022	23	60	10.0		191		8		72		89		1	1		15	14	297	306	166.2	166.3

Average: Geometric Mean Average:	183	2	<b>OR</b>	95	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

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



Date 23-Mar-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	1	2	2	2	2	2	2	2	1
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	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

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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 23-Mar-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	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	IBC	6	IBC	2	2	2	2	2	2	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

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