



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



Date 2/21/22

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.
2/21/2022	0	60	9.9		189		6		15		58		5			13		309		165.7	
2/21/2022	1	60	10.0		191		14		22		39		4			13		309		165.3	
2/21/2022	2	60	10.0		191		13		18		28		5			13		309		164.6	
2/21/2022	3	60	9.7		190		15		23		35		5	5		13		310	309	166.7	165.6
2/21/2022	4	60	10.0		188		19		20		9		5			13		309		166.2	
2/21/2022	5	60	9.9		191		16		27		43		5			13		305		167.9	
2/21/2022	6	60	10.1		188		15		21		28		6			14		304		165.8	
2/21/2022	7	60	10.2		196		23		30		22		6	5		13	13	304	306	167.5	166.8
2/21/2022	8	60	10.1		185		17		17		3		7			14		305		168.1	
2/21/2022	9	60	10.2		193		15		16		9		8			15		304		163.7	
2/21/2022	10	60	10.3		186		20		38		47		6			14		304		164.6	
2/21/2022	11	60	10.3		177		9		12		26		7	7		14		304	304	165.2	165.4
2/21/2022	12	60	10.4		188		20		49		59		7			14		305		165.3	
2/21/2022	13	60	10.4		191		15		30		51		7			14		304		167.6	
2/21/2022	14	60	10.3		199		6		6		0		6			13		304		166.5	
2/21/2022	15	60	10.4		197		15		30		50		6	6		14	14	305	305	165.5	166.2
2/21/2022	16	60	10.5		197		21		33		35		5			14		304		164.6	
2/21/2022	17	60	10.4		197		25		51		51		6			14		304		165.9	
2/21/2022	18	60	10.3		195		19		24		21		6			14		305		165.2	
2/21/2022	19	60	10.4		197		18		21		14		7	6		14		304	304	164.9	165.2
2/21/2022	20	60	10.1		197		18		19		7		7			14		305		166.0	
2/21/2022	21	60	10.1		196		19		14		0		6			14		304		166.5	
2/21/2022	22	60	10.4		194		18		9		0		6			14		304		164.4	
2/21/2022	23	60	10.2		196		17		11		0		6	6		13	14	304	304	164.5	165.4

Average: Geometric Mean Average:	192	16	<b>OR</b>	25	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 2/21/22

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.
2/21/2022	0	60	9.1		192		6		28		79		2			13		310		166.3	
2/21/2022	1	60	9.0		191		12		36		66		1			14		310		167.1	
2/21/2022	2	60	8.9		191		10		28		66		2			13		310		166.5	
2/21/2022	3	60	9.0		193		11		32		65		1	1		13		310	310	166.4	166.6
2/21/2022	4	60	9.1		181		13		32		60		1			13		310		166.7	
2/21/2022	5	60	9.3		191		11		43		75		1			13		305		166.6	
2/21/2022	6	60	9.2		197		9		26		66		2			13		305		167.0	
2/21/2022	7	60	9.5		186		17		35		51		3	2		13	13	304	306	164.1	166.1
2/21/2022	8	60	9.4		187		14		34		58		2			13		305		165.4	
2/21/2022	9	60	9.5		192		10		26		61		1			13		305		165.8	
2/21/2022	10	60	9.5		191		12		38		69		2			12		305		166.0	
2/21/2022	11	60	9.5		189		5		17		70		2	2		16		305	305	165.7	165.7
2/21/2022	12	60	9.4		174		9		27		68		1			13		305		166.2	
2/21/2022	13	60	9.4		180		10		24		58		1			13		310		166.2	
2/21/2022	14	60	9.3		189		16		29		44		3			14		310		165.2	
2/21/2022	15	60	9.4		186		9		25		63		3	2		14	13	308	308	165.4	165.7
2/21/2022	16	60	9.5		182		21		44		53		2			13		305		166.3	
2/21/2022	17	60	9.4		188		24		56		57		2			13		305		165.0	
2/21/2022	18	60	9.5		187		17		41		59		2			12		305		165.4	
2/21/2022	19	60	9.5		193		9		27		69		2	2		13		305	305	165.6	165.6
2/21/2022	20	60	9.5		187		8		25		67		2			14		305		166.3	
2/21/2022	21	60	9.6		190		9		26		68		2			13		304		165.6	
2/21/2022	22	60	9.6		189		16		30		48		1			12		305		165.6	
2/21/2022	23	60	9.5		196		15		30		50		1	1		14	13	305	305	165.8	165.8

Average: Geometric Mean Average:	188	11	<b>OR</b>	63	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

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



Date 21-Feb-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	2	2	1	2	2	1	2	2	1
1	1	2	2	1	2	1	2	2	2	1	1
2	2	2	2	1	1	1	1	1	1	1	1
3	1	2	1	2	1	1	1	2	1	1	1
4	1	1	1	1	1	1	1	2	1	1	1
5	1	1	1	2	2	1	1	1	1	1	1
6	2	IC	6	IC	1	1	1	1	2	1	2
7	2	1	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	1	1	1	1	1	1	1
12	1	1	2	2	2	1	1	1	1	1	1
13	2	2	2	2	2	2	1	1	1	2	1
14	2	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	2	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

**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 21-Feb-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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