



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



Date 3/6/22

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.
3/6/2022	0	60	10.1		198		18		69		74		5			14		309		166.5	
3/6/2022	1	60	10.2		198		18		62		70		4			14		309		164.9	
3/6/2022	2	60	10.2		198		19		56		66		4			15		309		164.5	
3/6/2022	3	60	10.1		199		21		67		69		4	4		14		309	309	165.4	165.3
3/6/2022	4	60	9.8		193		22		91		75		4			15		310		168.8	
3/6/2022	5	60	10.0		200		20		78		75		4			14		309		164.9	
3/6/2022	6	60	9.9		193		20		70		72		4			15		309		166.5	
3/6/2022	7	60	9.9		197		16		42		62		5	4		14	14	310	309	164.7	166.2
3/6/2022	8	60	9.6		192		20		62		68		6			14		309		165.2	
3/6/2022	9	60	9.5		196		18		50		64		5			14		309		167.8	
3/6/2022	10	60	9.7		196		19		42		55		4			14		310		166.8	
3/6/2022	11	60	9.6		197		19		52		64		4	5		13		309	309	166.0	166.4
3/6/2022	12	60	9.5		196		20		52		61		4			12		309		168.2	
3/6/2022	13	60	9.7		199		23		65		65		4			11		309		167.4	
3/6/2022	14	60	10.1		199		28		85		67		3			14		309		165.0	
3/6/2022	15	60	9.9		198		23		63		64		4	4		16	13	309	309	165.8	166.6
3/6/2022	16	60	9.9		197		32		108		70		3			10		310		165.9	
3/6/2022	17	60	10.2		198		33		129		75		3			15		309		164.0	
3/6/2022	18	60	10.0		198		24		84		72		4			14		310		164.6	
3/6/2022	19	60	9.9		197		23		74		69		4	4		14		309	309	165.9	165.1
3/6/2022	20	60	9.9		200		24		84		72		4			15		309		166.7	
3/6/2022	21	60	9.9		193		23		87		74		4			15		309		167.1	
3/6/2022	22	60	9.9		196		21		71		70		4			13		309		167.7	
3/6/2022	23	60	10.0		195		19		71		74		4	4		14	14	309	309	165.3	166.7

<b>Average:</b>	<b>197</b>	<b>21</b>	<b>OR</b>	<b>69</b>	see above	see above	see above	
<b>Geometric Mean Average:</b>					≤ 69 ppmc	≤ 12 lb/hr	≤ 345 °F	≤ 173 klb/hr
<b>Limit:</b>	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	4-HR Block Average	8-HR. Block Average	4-HR Block Average	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 3/6/22

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.
3/6/2022	0	60	9.3		170		20		53		63		1			15		305		165.8	
3/6/2022	1	60	9.0		163		17		37		55		1			15		305		166.9	
3/6/2022	2	60	8.9		155		21		34		37		0			14		305		166.9	
3/6/2022	3	60	9.1		149		14		29		51		0	1		14		305	305	164.9	166.1
3/6/2022	4	60	8.8		196		18	IBCT	42		57	IBCT	5			16		305		166.4	
3/6/2022	5	60	8.8		201		3	IT	33		92	IBCT	4			16		305		167.0	
3/6/2022	6	60	8.8		196		1	IT	19		95	IBT	4			16		305		166.6	
3/6/2022	7	60	8.6		199		0	IT	11		96	IBT	5	4		15	15	305	305	166.6	166.6
3/6/2022	8	60	8.7		196		5	IT	21		75	IBT	5			15		305		166.4	
3/6/2022	9	60	8.5		198		29	IBCMT	14		0	IBCMT	5			14		306		166.1	
3/6/2022	10	60	6.9	IBCM	116	IBCM	26	IBCMT	6.9		0	IBCMT	148	IBCM		14		304		166.4	
3/6/2022	11	60	8.7		181		14		30		54		2	4		14		305	305	167.3	166.6
3/6/2022	12	60	8.8		173		15		21		27		1			13		305		166.0	
3/6/2022	13	60	8.8		175		19		36		48		1			9		305		167.4	
3/6/2022	14	60	8.8		186		19		21		10		1			13		305		166.5	
3/6/2022	15	60	8.8		182		20		21		4		1	1		19	14	305	305	166.6	166.6
3/6/2022	16	60	8.9		184		20		28		31		1			12		305		167.4	
3/6/2022	17	60	8.8		175		20		40		50		1			13		305		166.2	
3/6/2022	18	60	8.7		180		16		31		47		1			13		305		166.7	
3/6/2022	19	60	8.7		183		19		21		13		1	1		14		305	305	167.3	166.9
3/6/2022	20	60	8.8		175		12		25		53		1			13		305		166.2	
3/6/2022	21	60	8.8		178		16		38		57		1			9		305		167.0	
3/6/2022	22	60	8.8		177		17		36		54		1			16		305		167.3	
3/6/2022	23	60	8.9		180		9		22		57		1	1		14	13	305	305	165.8	166.6

Average:  
Geometric Mean Average:

Limit:

181	17
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

44
≥ 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**

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



Date 06-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	1	2	1
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	5	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 06-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.

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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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