



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



Date 6/21/22

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.
6/21/2022	0	60	10.3		192		10		31		67		4			13		304		167.9	
6/21/2022	1	60	10.5		196		12		31		63		4			13		304		164.1	
6/21/2022	2	60	10.5		197		13		33		62		4			13		305		166.1	
6/21/2022	3	60	10.5		197		9		32		70		4	4		13		301	303	164.8	165.7
6/21/2022	4	60	10.6		195		12		30		59		3			13		304		164.7	
6/21/2022	5	60	10.7		193		8		21		63		5			13		305		164.0	
6/21/2022	6	60	10.5		192		4		19		77		5			13		304		165.9	
6/21/2022	7	60	10.9		184		6		19		67		4	4		13	13	304	304	163.5	164.5
6/21/2022	8	60	10.7		188		16		31		47		5			13		304		168.0	
6/21/2022	9	60	10.8		198		21		51		58		6			13		304		169.0	
6/21/2022	10	60	10.7		191		6		18		68		4			13		304		168.6	
6/21/2022	11	60	10.6		199		3		16		80		5	5		13		305	304	164.1	167.4
6/21/2022	12	60	10.7		198		6		31		82		5			13		304		164.4	
6/21/2022	13	60	10.6		197		18		62		71		5			13		304		165.5	
6/21/2022	14	60	10.7		201		17		58		71		4			16		305		165.1	
6/21/2022	15	60	10.6		199		13		62		80		5	5		16	14	304	304	165.2	165.0
6/21/2022	16	60	10.7		198		13		44		71		4			14		305		166.9	
6/21/2022	17	60	10.6		197		9		40		78		3			19		305		168.2	
6/21/2022	18	60	10.3		169		4		42		92		14			16		304		164.8	
6/21/2022	19	60	10.6		199		7		40		84		4	6		20		304	304	165.4	166.3
6/21/2022	20	60	10.6		198		10		41		76		4			20		304		166.7	
6/21/2022	21	60	10.4		198		13		53		75		3			20		304		167.6	
6/21/2022	22	60	10.4		200		19		59		67		4			21		304		166.1	
6/21/2022	23	60	10.4		197		17		51		67		4	4		21	19	305	304	165.7	166.5

Average:  
Geometric Mean Average:

Limit:

195	10
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

72
≥ 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



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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.
6/21/2022	0	60	10.5		198		6		0		0		2			13		317		166.7	
6/21/2022	1	60	10.7		197		6		0		0		4			15		318		165.4	
6/21/2022	2	60	10.6		197		13		0		0		3			16		323		167.8	
6/21/2022	3	60	10.7		190		5		0		0		3	3		16		314	318	166.3	166.6
6/21/2022	4	60	10.6		190		3		0		0		3			14		305		167.0	
6/21/2022	5	60	10.5		196		3		0		0		2			15		307		166.2	
6/21/2022	6	60	10.6		194		5		0		0		2			15		308		164.7	
6/21/2022	7	60	11.1		196		2		0		0		3	2		15	15	305	307	157.4	163.8
6/21/2022	8	60	11.0		188		0		2		70		4			15		286		150.1	
6/21/2022	9	60	10.2		190		1		2		39		2			15		290		168.0	
6/21/2022	10	60	10.1		181		2		0		0		1			15		306		166.5	
6/21/2022	11	60	9.9		192		1		0		0		2	2		15		305	297	166.2	162.7
6/21/2022	12	60	10.3		190		4		24		82		1			15		299		166.7	
6/21/2022	13	60	10.1		193		21		73		71		2			15		312		166.3	
6/21/2022	14	60	9.8		180		20		66		69		33			13		303		168.8	
6/21/2022	15	60	9.8		187		12		49		76		1	9		11	14	300	303	166.5	167.1
6/21/2022	16	60	10.0		183		3		25		89		0			15		301		165.2	
6/21/2022	17	60	9.9		190		5		24		77		1			18		304		167.4	
6/21/2022	18	60	9.9		191		3		19		83		1			10		310		166.9	
6/21/2022	19	60	10.0		190		8		26		69		0	0		16		311	306	166.2	166.4
6/21/2022	20	60	10.0		190		9		26		63		0			17		309		166.8	
6/21/2022	21	60	10.0		188		14		28		50		1			16		312		167.1	
6/21/2022	22	60	10.0		187		14		28		51		1			17		314		166.8	
6/21/2022	23	60	10.0		187		14		29		51		1	1		18	16	313	312	166.6	166.8

Average:  
Geometric Mean Average:

Limit:

190	5
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

0
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average ppmc

see above
≤ 12 8-HR. Block Average lb/hr

see above
≤ 345 4-HR Block Average °F

see above
≤ 173 4-HR Block Average klb/hr

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



Date 21-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 21-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	0	0	1	1	0	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	0	1	1	1	1	1	1	1	1	1	1
11	1	1	0	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	0	1	1	1	1	1	1	1	1	1	1
18	1	1	1	0	1	1	1	1	1	1	1
19	1	1	1	1	0	1	0	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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