



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



Date 5/2/22

Wheel Plant Wheelabrator North Andover
Unit 1 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.
5/2/2022	0	60	9.8		169		6		25		77		5			13		310		166.0	
5/2/2022	1	60	9.9		166		8		32		77		5			13		301		165.8	
5/2/2022	2	60	10.0		166		17		33		48		5			13		305		167.9	
5/2/2022	3	60	10.0		165		17		36		53		5	5		13		301	304	166.8	166.6
5/2/2022	4	60	9.7		164		15		28		47		5			13		301		167.1	
5/2/2022	5	60	9.7		158		15		24		37		5			13		310		167.6	
5/2/2022	6	60	9.8		159		6		23		73		6			13		302		165.4	
5/2/2022	7	60	9.7		171		14		24		43		6	5		13	13	308	305	166.4	166.7
5/2/2022	8	60	9.9		181		11		19		44		6			13		312		166.9	
5/2/2022	9	60	9.9		174		8		16		49		6			13		318		166.1	
5/2/2022	10	60	10.1		182		3		14		80		6			13		310		164.6	
5/2/2022	11	60	10.0		178		4		13		74		6	6		13		309	312	166.8	166.1
5/2/2022	12	60	10.0		182		13		16		21		7			13		321		167.2	
5/2/2022	13	60	9.9		167		6		14		60		7			13		315		166.1	
5/2/2022	14	60	10.1		174		10		16		39		6			13		315		165.7	
5/2/2022	15	60	10.0		174		13		39		67		6	7		13	13	313	316	165.2	166.0
5/2/2022	16	60	9.9		168		4		25		83		7			13		303		166.1	
5/2/2022	17	60	10.2		179		3		21		88		6			13		299		165.1	
5/2/2022	18	60	10.2		182		17		47		64		6			13		304		168.5	
5/2/2022	19	60	10.1		182		13		39		66		6	6		13		304	303	167.8	166.9
5/2/2022	20	60	10.0		182		7		31		79		5			13		302		165.6	
5/2/2022	21	60	10.0		180		14		37		63		6			13		303		167.4	
5/2/2022	22	60	10.0		179		13		28		54		5			13		305		168.1	
5/2/2022	23	60	9.9		174		9		24		61		6	6		13	13	305	304	167.9	167.3

Average: Geometric Mean Average:	173	9	OR	64	see above	see above	see above	
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean	OR	≥ 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 5/2/22

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.
5/2/2022	0	60	9.4		197		0		48		99		3			15		310		165.6	
5/2/2022	1	60	9.2		196		0		41		100		4			15		310		167.6	
5/2/2022	2	60	9.4		194		0		52		100		2			14		310		167.2	
5/2/2022	3	60	9.4		188		0		46		100		4	3		15		310	310	166.9	166.8
5/2/2022	4	60	9.4		189		0		52		99		8			14		310		166.8	
5/2/2022	5	60	9.3		201		0		50		100		3			13		310		167.5	
5/2/2022	6	60	9.3		189		0		54		99		5			13		310		167.5	
5/2/2022	7	60	9.6		184		1		44		97		4	5		14	14	310	310	162.5	166.1
5/2/2022	8	60	10.4		190		1		23		94		11			14		310		153.5	
5/2/2022	9	60	9.7		208		0		27		100		5			14		310		160.3	
5/2/2022	10	60	9.6		191		0		25	IBM	100	IBM	4			13		310		164.4	
5/2/2022	11	60	9.6		197		0		14		99		3	6		13		310	310	166.8	161.3
5/2/2022	12	60	9.3		198		0		17		99		4			13		310		165.7	
5/2/2022	13	60	9.3	IBCM	146	IBCM	0	IBCM	22		98	IBCM	45	IBCM		13		310		167.9	
5/2/2022	14	60	9.5		189		2		18		91		3			13		310		166.5	
5/2/2022	15	60	9.6		197		0		30		100		2	3		13	13	310	310	168.0	167.0
5/2/2022	16	60	9.7		196		2		40		96		3			13		310		167.0	
5/2/2022	17	60	9.6		186		0		33		99		2			13		310		168.3	
5/2/2022	18	60	9.8		196		5		87		94		4			13		310		167.1	
5/2/2022	19	60	9.6		193		1		43		97		3	3		14		310	310	168.3	167.7
5/2/2022	20	60	9.6		188		1		38		96		2			14		310		166.8	
5/2/2022	21	60	9.6		195		0		49		99		3			14		310		168.3	
5/2/2022	22	60	9.6		197		0		50		99		2			14		310		167.6	
5/2/2022	23	60	9.6		196		0		34		100		3	2		14	14	310	310	167.0	167.4

Average:
Geometric Mean Average:

Limit:

194	0
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

99
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≤ 12 8-HR. Block Average

lb/hr

see above
≤ 345 °F 4-HR Block Average

°F

see above
≤ 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 OPACITY REPORT



Date 02-May-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	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

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 02-May-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	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	2	IBC	4	IBC	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0

Status Flags

I - Invalid C - Calibration F - Offline T - Out of Control ^ - Startup
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown