



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



Date 4/3/22

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.
4/3/2022	0	60	9.9		193		24		98		76		4			15		309		166.4	
4/3/2022	1	60	9.8		193		14		68		79		5			14		309		168.9	
4/3/2022	2	60	9.8		199		13		61		79		4			15		309		168.6	
4/3/2022	3	60	9.8		197		26		65		61		5	5		14		309	309	169.6	168.4
4/3/2022	4	60	9.6		197		18		69		74		4			14		310		170.2	
4/3/2022	5	60	10.6		194		20		80		76		5			14		308		155.0	
4/3/2022	6	60	11.0		164		17		68		75		8			14		309		131.3	
4/3/2022	7	60	10.9		165		13		62		79		7	6		15	14	310	309	128.1	146.1
4/3/2022	8	60	10.9		159		9		55		84		7			14		308		128.9	
4/3/2022	9	60	10.8		163		13		71		81		6			14		310		131.1	
4/3/2022	10	60	11.0		168		20		108		81		6			14		310		131.1	
4/3/2022	11	60	11.0		163		9		60		85		7	6		14		309	309	129.5	130.2
4/3/2022	12	60	11.0		162		8		61		86		5			15		310		128.6	
4/3/2022	13	60	11.0		157		5		51		89		6			14		310		127.8	
4/3/2022	14	60	11.0		163		6		58		89		5			14		308		128.4	
4/3/2022	15	60	10.6		167		11		66		84		4	5		15	14	309	309	134.3	129.8
4/3/2022	16	60	10.9		161		7		71		90		5			15		300		129.6	
4/3/2022	17	60	11.1		165		6		55		89		8			15		309		125.9	
4/3/2022	18	60	10.7		162		7		65		89		6			14		309		127.7	
4/3/2022	19	60	10.8		163		11		72		85		5	6		14		309	307	129.5	128.2
4/3/2022	20	60	10.9		165		17		89		81		6			14		308		128.9	
4/3/2022	21	60	10.3		168		18		75		77		6			14		312		136.5	
4/3/2022	22	60	9.4		189		19		72		73		3			14		314		160.1	
4/3/2022	23	60	9.4		194		22		85		74		4	5		14	14	311	311	168.6	148.5

Average:
Geometric Mean Average:

Limit:

174	13
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

82
≥ 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

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 COMPLIANCE SUMMARY REPORT



Date 4/3/22

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.
4/3/2022	0	60	9.7		196		17		95		82		1			14		310		167.3	
4/3/2022	1	60	9.7		191		10		67		86		2			15		310		167.4	
4/3/2022	2	60	9.7		193		6		61		89		2			14		310		167.9	
4/3/2022	3	60	9.8		184		11		65		83		3	2		14		310	310	167.4	167.5
4/3/2022	4	60	9.6		195		5		67		92		1			15		310		167.7	
4/3/2022	5	60	10.6		183		7		63		88		2			15		309		149.5	
4/3/2022	6	60	11.4		193		4		40		89		6			15		310		129.7	
4/3/2022	7	60	11.3		190		2		35		95		4	3		15	15	310	310	129.9	144.2
4/3/2022	8	60	11.2		191		7		66		90		4			14		310		130.2	
4/3/2022	9	60	11.2		190		4		55		93		4			14		310		129.9	
4/3/2022	10	60	11.0		190		8		62		88		5			14		310		131.4	
4/3/2022	11	60	11.1		188		2		42		95		3	4		14		310	310	130.4	130.5
4/3/2022	12	60	9.7		164		7		87		92		10			14		309		142.2	
4/3/2022	13	60	10.4		186		6		64		91		3			15		311		142.3	
4/3/2022	14	60	10.9		186		3		47		94		4			14		309		131.5	
4/3/2022	15	60	11.4		192		4		55		93		4	5		15	14	310	310	131.7	136.9
4/3/2022	16	60	11.6		192		4		52		93		4			14		310		130.1	
4/3/2022	17	60	11.6		192		3		51		95		4			15		310		130.3	
4/3/2022	18	60	11.0		191		7		65		90		3			15		310		139.0	
4/3/2022	19	60	11.5		192		5		65		92		3	3		15		310	310	130.4	132.4
4/3/2022	20	60	11.5		188		5		60		92		5			15		310		132.0	
4/3/2022	21	60	10.7		193		7		67		90		3			15		311		145.3	
4/3/2022	22	60	9.9		179		13		82		84		1			15		310		169.1	
4/3/2022	23	60	10.0		186		13		85		85		1	3		15	15	310	310	169.0	153.8

Average: Geometric Mean Average:	189	6	OR	91	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 03-Apr-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 03-Apr-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

Status Flags

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