



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



Date 7/16/22

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.
7/16/2022	0	60	9.8		184		1		60		98		4			13		301		166.9	
7/16/2022	1	60	9.8		192		5		61		92		3			13		299		166.6	
7/16/2022	2	60	9.8		194		11		68		83		3			13		303		165.7	
7/16/2022	3	60	9.9		194		13		62		79		3	3		13		306	302	166.1	166.3
7/16/2022	4	60	9.9		194		15		67		78		3			13		307		165.0	
7/16/2022	5	60	9.8		197		21		73		71		3			13		316		166.5	
7/16/2022	6	60	9.9		195		20		69		71		3			13		321		165.2	
7/16/2022	7	60	9.7		184		19		74		74		3	3		13	13	318	316	166.7	165.8
7/16/2022	8	60	10.1		188		6		50		88		3			13		306		163.8	
7/16/2022	9	60	10.1		189		11		79		86		3			13		301		166.1	
7/16/2022	10	60	10.0		190		11		65		83		3			13		304		166.8	
7/16/2022	11	60	9.9		191		19		93		80		3	3		13		306	304	167.7	166.1
7/16/2022	12	60	10.1		193		19		91		79		3			13		309		165.5	
7/16/2022	13	60	9.8		186		31		128		76		3			13		312		166.7	
7/16/2022	14	60	9.9		185		21		98		79		7			13		312		166.2	
7/16/2022	15	60	10.0		172		12		80		85		3	4		13	13	304	309	168.3	166.7
7/16/2022	16	60	10.0		186		29		135		78		3			13		298		167.1	
7/16/2022	17	60	10.0		193		37		157		76		3			13		301		166.0	
7/16/2022	18	60	9.9		189		23		100		77		3			13		309		168.1	
7/16/2022	19	60	10.2		187		8		62		87		2	3		13		305	303	164.4	166.4
7/16/2022	20	60	10.0		189		21		82		75		2			13		306		167.3	
7/16/2022	21	60	10.0		187		27		120		77		3			13		306		166.4	
7/16/2022	22	60	9.9		187		22		96		78		3			13		308		166.4	
7/16/2022	23	60	9.9		163		19		98		81		5	3		13	13	310	308	165.9	166.5

Average: Geometric Mean Average:	188	15	OR	82	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

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 COMPLIANCE SUMMARY REPORT



Date 7/16/22

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.
7/16/2022	0	60	10.9		170		4		43		90		2			13		309		160.0	
7/16/2022	1	60	10.9		174		3		43		93		2			13		309		159.7	
7/16/2022	2	60	10.7		166		5		41		87		2			13		315		163.1	
7/16/2022	3	60	10.5		167		15		59		75		2	2		13		320	313	173.2	164.0
7/16/2022	4	60	10.7		161		5		48		90		3			13		303		166.1	
7/16/2022	5	60	10.7		178		10		44		78		2			13		311		165.4	
7/16/2022	6	60	10.7		179		15		43		65		2			14		317		164.4	
7/16/2022	7	60	10.8		173		17		39		55		1	2		14	13	314	311	165.7	165.4
7/16/2022	8	60	10.8		170		6		31		80		2			14		315		165.9	
7/16/2022	9	60	10.5		160		7		40		82		2			14		315		170.5	
7/16/2022	10	60	10.6		172		14		76		82		2			14		307		165.6	
7/16/2022	11	60	10.8		165		31		133		77		2	2		14		306	311	165.3	166.8
7/16/2022	12	60	10.8		178		10		55		82		1			14		309		163.4	
7/16/2022	13	60	10.9		157		4		45		92		1			13		307		160.7	
7/16/2022	14	60	10.5		155		16		68		77		1			13		310		168.5	
7/16/2022	15	60	10.7		161		33		103		68		2	1		13	14	314	310	167.4	165.0
7/16/2022	16	60	10.7		178		33		119		72		2			13		315		165.9	
7/16/2022	17	60	10.7		148		28		110		74		5			14		312		165.2	
7/16/2022	18	60	10.2		160		29		113		74		1			14		317		168.4	
7/16/2022	19	60	10.6		168		22		70		68		3	3		13		321	316	168.3	166.9
7/16/2022	20	60	10.9		152		14		90		85		3			14		307		164.4	
7/16/2022	21	60	10.8		155		20		75		73		2			14		305		165.5	
7/16/2022	22	60	10.6		181		19		72		73		2			14		312		169.8	
7/16/2022	23	60	9.9		134		13		76		82		176	46		13	14	307	308	163.7	165.9

Average: Geometric Mean Average:	165	12	OR	80	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 OPACITY REPORT



Date 16-Jul-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	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	1	1	1	1	1	1
5	1	1	1	1	1	1	1	1	1	1	1
6	2	IC	5	IC	1	1	1	1	1	1	2
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	1	1	1	1	1	1	1	1	1	1	1
11	1	1	1	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	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 16-Jul-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	1	1	1	1	1	1	1	1	1	1
1	1	1	2	1	1	1	1	1	1	1	1
2	1	1	1	2	1	2	2	1	2	2	1
3	2	2	2	1	2	2	2	2	2	2	2
4	1	1	2	1	1	1	1	1	1	1	1
5	2	1	1	2	2	1	2	2	2	1	1
6	1	IBC	6	IBC	2	1	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	1	1	1	2	2	1	1	1	1	1	1
10	2	2	2	2	2	2	2	2	2	2	2
11	2	2	2	2	2	2	1	1	1	2	2
12	2	2	2	2	2	2	1	1	2	2	2
13	2	2	2	1	1	1	2	2	2	1	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	1	2	2	1	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	1	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