



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



Date 8/8/22

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.
8/8/2022	0	60	9.8		181		15		65		77		3			13		308		163.6	
8/8/2022	1	60	9.8		168		6		57		90		4			13		304		159.7	
8/8/2022	2	60	9.8		165		17		55		69		4			13		300		161.9	
8/8/2022	3	60	9.8		183		28		51		44		3	4		13		313	306	165.9	162.8
8/8/2022	4	60	9.8		176		4		35		89		3			13		305		164.2	
8/8/2022	5	60	9.8		172		4		34		88		2			13		304		167.3	
8/8/2022	6	60	9.8		177		1		28		96		4			13		303		162.0	
8/8/2022	7	60	9.9		178		6		28		77		4	3		13	13	311	306	162.7	164.1
8/8/2022	8	60	9.9		177		7		32		79		5			13		307		161.6	
8/8/2022	9	60	9.9		185		15		53		71		5			13		312		165.4	
8/8/2022	10	60	10.1		194		38		139		73		4			13		310		167.1	
8/8/2022	11	60	10.1		185		25		113		78		4	5		13		309	309	166.5	165.2
8/8/2022	12	60	9.7		176		6		35		84		5			13		309		160.6	
8/8/2022	13	60	9.9		183		27		102		73		4			13		317		166.0	
8/8/2022	14	60	9.8		183		18		66		73		5			13		311		166.0	
8/8/2022	15	60	9.4		166		10		60		84		75	22		13	13	308	311	166.5	164.8
8/8/2022	16	60	9.9		175		6		57		90		5			13		299		164.4	
8/8/2022	17	60	9.7		188		12		47		75		5			13		306		165.6	
8/8/2022	18	60	9.7		192		18		55		67		4			13		311		165.6	
8/8/2022	19	60	11.0		195		11		59		82		4	4		13		305	305	165.1	165.2
8/8/2022	20	60	9.9		183		17		60		71		4			13		305		166.1	
8/8/2022	21	60	9.7		182		17		57		71		4			14		308		167.1	
8/8/2022	22	60	9.7		175		14		47		70		4			13		308		165.3	
8/8/2022	23	60	9.6		178		2		30		93		4	4		13	13	307	307	165.3	165.9

Average: Geometric Mean Average:	180	10	OR	81	see above	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
- 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 8/8/22

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.
8/8/2022	0	60	10.1		182		14		51		73		2			14		320		165.9	
8/8/2022	1	60	10.7		174		4		37		88		4			13		308		157.3	
8/8/2022	2	60	10.5		178		7		41		84		2			14		308		158.1	
8/8/2022	3	60	9.6		182		6		33		82		2	2		14		315	313	170.5	163.0
8/8/2022	4	60	10.4		181		4		28		86		41			14		308		165.8	
8/8/2022	5	60	10.4		143		2		24		91		1			14		297		164.8	
8/8/2022	6	60	10.2		157		2		18		88		3			13		309		166.7	
8/8/2022	7	60	10.5		165		5		26		82		3	12		13	14	306	305	164.2	165.4
8/8/2022	8	60	10.5		191		3		18		81		4			14		307		162.4	
8/8/2022	9	60	10.2		188		11		40		73		5			14		316		164.5	
8/8/2022	10	60	10.1		189		15		63		76		4			14		314		166.7	
8/8/2022	11	60	10.5		193		9		38		76		3	4		13		307	311	162.8	164.1
8/8/2022	12	60	10.4		174		7		40		82		2			14		305		165.0	
8/8/2022	13	60	9.7		185		14		31		55		21			14		318		170.3	
8/8/2022	14	60	10.0		179		8		30		75		2			14		304		164.7	
8/8/2022	15	60	9.9		189		10		27		64		2	7		13	14	314	310	165.0	166.3
8/8/2022	16	60	9.7		182		8		24		65		3			14		319		166.0	
8/8/2022	17	60	9.8		188		6		31		81		2			14		308		166.4	
8/8/2022	18	60	9.9		183		7		21		70		2			14		310		165.7	
8/8/2022	19	60	9.9		184		9		28		69		2	2		14		314	313	166.1	166.0
8/8/2022	20	60	10.2		174		9		29		68		3			14		311		165.1	
8/8/2022	21	60	10.2		170		5		27		82		2			14		308		165.9	
8/8/2022	22	60	9.8		184		6		26		76		2			14		306		168.3	
8/8/2022	23	60	10.1		184		3		21		83		1	2		14	14	302	307	164.6	166.0

Average:
Geometric Mean Average:

Limit:

179	6
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

79
≥ 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 08-Aug-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	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	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 08-Aug-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	1	0	1	0	0	0	0
1	0	1	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	1	0	0	0	1	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	2	IBC	5	IBC	0	0	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	1	1	1	1	1	1	1	1	1	1	1
11	1	1	1	1	1	1	1	1	0	1	0
12	0	0	0	1	1	0	0	0	0	0	0
13	0	0	1	1	1	1	1	1	1	1	0
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	0	1	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	1	0	0	0	0	1	0	0
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