



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



Date 6/8/22

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.
6/8/2022	0	60	10.2		192		17		45		62		5			13		304		166.8	
6/8/2022	1	60	10.3		186		17		53		69		5			13		304		167.3	
6/8/2022	2	60	10.2		198		19		54		64		4			13		305		167.0	
6/8/2022	3	60	10.3		197		20		45		57		4	4		13		304	304	167.8	167.2
6/8/2022	4	60	10.2		192		17		46		63		4			14		304		170.0	
6/8/2022	5	60	10.3		190		17		51		68		4			13		305		166.2	
6/8/2022	6	60	10.4		189		14		55		74		4			13		304		164.5	
6/8/2022	7	60	10.2		191		15		48		69		4	4		13	13	305	304	166.7	166.8
6/8/2022	8	60	10.6		185		17		58		70		8			13		304		167.1	
6/8/2022	9	60	10.4		186		11		49		78		6			13		305		166.1	
6/8/2022	10	60	10.2		176		17		56		70		6			13		304		168.7	
6/8/2022	11	60	10.5		181		12		51		76		4	6		13		304	304	169.7	167.9
6/8/2022	12	60	10.0		188		14		58		76		4			13		305		167.7	
6/8/2022	13	60	10.4		191		13		71		81		4			13		304		164.6	
6/8/2022	14	60	10.0		191		22		90		76		3			14		304		169.0	
6/8/2022	15	60	10.0		194		8		46		82		3	4		13	13	304	304	168.7	167.5
6/8/2022	16	60	10.0		190		11		53		79		3			13		304		168.4	
6/8/2022	17	60	9.9		183		3		38		91		4			13		305		168.3	
6/8/2022	18	60	10.3		197		11		46		76		3			13		304		167.3	
6/8/2022	19	60	10.2		196		19		64		71		3	3		13		305	304	165.6	167.4
6/8/2022	20	60	10.1		196		17		62		73		3			13		305		167.5	
6/8/2022	21	60	10.1		198		13		53		75		3			13		304		168.1	
6/8/2022	22	60	10.1		197		11		48		77		3			13		304		165.4	
6/8/2022	23	60	10.1		195		11		57		82		3	3		14	13	305	304	167.5	167.1

Average:
Geometric Mean Average:

Limit:

191	14
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

74
≥ 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



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



Date 6/8/22

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.
6/8/2022	0	60	10.5		194		18		30		41		1			14		307		167.4	
6/8/2022	1	60	10.6		197		18		31		40		1			14		310		166.7	
6/8/2022	2	60	10.5		195		35		37		6		2			14		311		167.9	
6/8/2022	3	60	10.6		197		22		29		26		1	1		14		316	311	168.3	167.6
6/8/2022	4	60	10.5		186		17		30		44		3			14		311		167.1	
6/8/2022	5	60	10.6		191		17		51		66		1			14		309		168.5	
6/8/2022	6	60	10.6		194		12		43		73		2			14	14	306		166.3	
6/8/2022	7	60	10.6		189		8		26		68		2	2		14		313	310	168.0	167.5
6/8/2022	8	60	10.6		183		22		64		66		3			14		307		168.0	
6/8/2022	9	60	10.3		184		5		41		88		47			14		295		167.2	
6/8/2022	10	60	10.4		185		6		25		76		2			14		302		166.0	
6/8/2022	11	60	10.3		182		12		49		75		2	13		14		301	301	167.3	167.1
6/8/2022	12	60	9.9		193		13		49		74		2			14		304		167.8	
6/8/2022	13	60	10.0		198		4		42		91		1			14		296		166.2	
6/8/2022	14	60	10.3		192		5		42		89		0			14		292		167.5	
6/8/2022	15	60	10.3		193		8		27		71		0	1		14	14	309	301	168.1	167.4
6/8/2022	16	60	10.3		194		8		36		77		0			14		312		166.4	
6/8/2022	17	60	10.2		198		9		27		65		0			14		313		169.6	
6/8/2022	18	60	10.1		197		9		29		67		0			14		317		167.1	
6/8/2022	19	60	10.1		197		15		36		57		1	0		14		323	316	167.9	167.7
6/8/2022	20	60	10.0		193		12		34		64		0			14		318		167.8	
6/8/2022	21	60	10.1		198		10		36		72		0			14		311		168.1	
6/8/2022	22	60	10.3		195		15		43		66		1			14		309		167.0	
6/8/2022	23	60	10.2		197		22		53		59		0	0		14	14	314	313	168.9	168.0

Average: Geometric Mean Average:	193	12	OR	68	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

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-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 08-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	1	1	1	1	1	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	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