



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



Date 6/7/22

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.
6/7/2022	0	60	10.3		198		24		64		63		4			14		304		166.5	
6/7/2022	1	60	10.1		194		20		49		59		4			13		304		167.1	
6/7/2022	2	60	10.1		193		15		35		57		4			13		304		167.6	
6/7/2022	3	60	10.2		190		16		34		54		4	4		14		304	304	166.7	167.0
6/7/2022	4	60	10.2		197		20		37		46		3			13		304		168.4	
6/7/2022	5	60	10.2		194		13		22		40		3			13		305		166.2	
6/7/2022	6	60	10.2		195		18		26		32		4			13		304		166.4	
6/7/2022	7	60	10.3		194		12		23		47		4	4		13	13	304	304	165.7	166.6
6/7/2022	8	60	11.0		161		8		35		77		9			14		304		148.8	
6/7/2022	9	60	10.4		177		29		94		69		4			13		304		166.5	
6/7/2022	10	60	10.3		190		26		95		73		4			14		305		168.5	
6/7/2022	11	60	10.3		193		24		87		72		4	5		14		305	304	169.2	163.2
6/7/2022	12	60	10.5		196		16		52		69		4			13		304		169.6	
6/7/2022	13	60	10.6		181		12		38		69		6			14		304		164.5	
6/7/2022	14	60	10.6		197		22		70		69		6			13		305		167.4	
6/7/2022	15	60	10.5		198		18		56		68		6	5		14	13	304	304	167.1	167.1
6/7/2022	16	60	10.4		186		19		77		76		6			13		304		166.8	
6/7/2022	17	60	10.6		188		7		42		83		4			14		304		166.1	
6/7/2022	18	60	10.6		197		20		68		71		4			13		304		167.7	
6/7/2022	19	60	10.6		197		21		71		71		3	4		14		304	304	169.6	167.5
6/7/2022	20	60	10.5		198		20		77		74		4			13		304		168.3	
6/7/2022	21	60	10.5		198		23		75		69		4			14		304		167.4	
6/7/2022	22	60	10.3		199		21		70		70		4			13		305		167.0	
6/7/2022	23	60	10.5		196		14		49		71		4	4		13	13	304	304	165.3	167.0

Average:
Geometric Mean Average:

Limit:

192	17
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

66
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≤ 12 8-HR. Block Average

lb/hr

see above
≤ 345 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 COMPLIANCE SUMMARY REPORT



Date 6/7/22

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.
6/7/2022	0	60	10.1		196		7		11		35		1			13		311		167.7	
6/7/2022	1	60	10.2		196		7		10		30		1			13		314		168.8	
6/7/2022	2	60	10.1		197		7		8		3		2			13		316		168.1	
6/7/2022	3	60	10.2		197		9		10		6		2	1		13		317	314	166.9	167.9
6/7/2022	4	60	10.2		197		11		12		3		2			13		318		167.4	
6/7/2022	5	60	10.1		190		18		23		21		1			13		316		168.8	
6/7/2022	6	60	10.1		192		10		15		35		2			12	13	309		166.3	
6/7/2022	7	60	10.1		198		17		21		21		2	2		12	13	313	314	168.6	167.7
6/7/2022	8	60	10.7		186		21		32		35		3			12		308		159.1	
6/7/2022	9	60	10.4		186		40		45		11		3			12		306		168.9	
6/7/2022	10	60	11.7		191		19		40		54		19			13		299		148.4	
6/7/2022	11	60	10.6		187		20		40		49		2	7		13		305	304	159.2	158.9
6/7/2022	12	60	10.7		195		11		25		58		2			15		308		167.6	
6/7/2022	13	60	10.8		193		11		19		43		2			14		311		168.4	
6/7/2022	14	60	10.8		195		27		43		37		1			14		311		168.0	
6/7/2022	15	60	10.6		197		23		45		49		2	2		14	13	311	310	167.2	167.8
6/7/2022	16	60	10.4		194		22		55		61		2			15		317		167.3	
6/7/2022	17	60	10.6		197		14		30		53		1			14		313		167.3	
6/7/2022	18	60	10.5		191		10		29		65		1			14		309		167.6	
6/7/2022	19	60	10.5		194		22		52		58		1	1		14		313	313	167.8	167.5
6/7/2022	20	60	10.3		192		45		60		24		1			14		316		171.6	
6/7/2022	21	60	10.6		193		25		43		41		1			14		316		168.0	
6/7/2022	22	60	10.5		193		11		35		67		1			14		312		166.3	
6/7/2022	23	60	10.6		199		19		48		61		1	1		14	14	308	313	167.5	168.3

Average:
Geometric Mean Average:

Limit:

194	16
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

41
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 07-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 07-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