



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



Date 3/22/22

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.
3/22/2022	0	60	9.9		187		17		46		63		3			14		304		167.8	
3/22/2022	1	60	10.0		185		20		57		66		4			14		304		164.9	
3/22/2022	2	60	10.0		196		18		44		59		3			13		305		165.8	
3/22/2022	3	60	10.1		195		19		44		56		2	3		12		304	304	164.7	165.8
3/22/2022	4	60	10.2		192		21		48		55		3			14		304		165.7	
3/22/2022	5	60	10.0		183		21		52		60		4			14		305		166.0	
3/22/2022	6	60	10.1		182		19		45		57		5			15		304		162.1	
3/22/2022	7	60	10.2		187		21		43		51		5	4		13	14	305	304	165.2	164.7
3/22/2022	8	60	10.5		182		26		65		60		4			13		305		164.6	
3/22/2022	9	60	10.2		189		29		120		76		6			14		304		164.3	
3/22/2022	10	60	10.3		191		26		96		72		5			14		304		165.7	
3/22/2022	11	60	10.3		190		20		62		67		6	5		13		305	304	165.5	165.0
3/22/2022	12	60	10.4		187		26		97		73		6			15		304		165.9	
3/22/2022	13	60	10.2		194		20		85		76		7			13		304		163.5	
3/22/2022	14	60	10.2		182		19		74		75		5			13		304		164.8	
3/22/2022	15	60	10.1		179		19		67		71		5	6		14	14	304	304	165.3	164.9
3/22/2022	16	60	10.0		180		9		43		79		6			14		304		167.3	
3/22/2022	17	60	10.1		193		9		43		79		5			14		305		165.6	
3/22/2022	18	60	10.1		192		14		55		74		6			13		305		166.7	
3/22/2022	19	60	10.0		192		14		49		71		5	6		15		304	304	165.6	166.3
3/22/2022	20	60	10.0		191		17		74		76		5			13		304		165.8	
3/22/2022	21	60	10.1		187		14		46		71		5			13		304		164.9	
3/22/2022	22	60	9.9		190		16		58		72		6			13		305		166.2	
3/22/2022	23	60	10.0		189		18		59		70		5	5		14	14	304	304	165.9	165.7

Average:
Geometric Mean Average:

Limit:

188	18
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

69
≥ 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 COMPLIANCE SUMMARY REPORT



Date 3/22/22

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.
3/22/2022	0	60	9.4		194		19		39		50		2			14		305		165.7	
3/22/2022	1	60	9.5		190		18		38		52		2			16		305		165.5	
3/22/2022	2	60	9.4		185		9		21		59		2			18		305		166.0	
3/22/2022	3	60	9.3		197		7		24		70		2	2		16		305	305	165.7	165.7
3/22/2022	4	60	9.4		183		10		30		66		2			14		305		165.5	
3/22/2022	5	60	9.3		180		22		51		57		1			16		305		165.6	
3/22/2022	6	60	9.3		175		8		31		74		1			14		304		165.7	
3/22/2022	7	60	9.5		185		2		31		93		1	2		14	15	305	305	165.6	165.6
3/22/2022	8	60	9.7		180		1		34		96		2			15		305		165.2	
3/22/2022	9	60	9.6		191		10		147		94		2			15		305		165.5	
3/22/2022	10	60	9.9		178		19		106		82		2			16		306		166.7	
3/22/2022	11	60	10.4		179		14		57		75		6	3		16		304	305	161.5	164.7
3/22/2022	12	60	9.5		177		14		57		74		1			15		305		167.6	
3/22/2022	13	60	9.5		183		19		76		75		1			14		305		166.8	
3/22/2022	14	60	9.5		181		19		77		75		3			14		305		165.9	
3/22/2022	15	60	9.3		189		15		62		75		2	2		14	15	305	305	167.2	166.9
3/22/2022	16	60	9.3		177		7		36		81		2			14		305		166.5	
3/22/2022	17	60	9.3		193		7		39		82		2			15		305		167.2	
3/22/2022	18	60	9.4		182		6		52		87		2			15		304		166.3	
3/22/2022	19	60	9.4		186		7		51		86		3	2		15		304	305	166.6	166.6
3/22/2022	20	60	9.4		188		2		39		95		2			14		302		166.8	
3/22/2022	21	60	9.4		183		2		36		95		2			14		302		166.6	
3/22/2022	22	60	9.4		169		9		63		86		2			14		306		166.4	
3/22/2022	23	60	9.5		187		11		73		84		2	2		14	14	302	303	165.4	166.3

Average:
Geometric Mean Average:

Limit:

184	8
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

82
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 22-Mar-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	1	2	2	2	1	1
3	2	2	2	2	1	2	2	2	2	2	1
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 22-Mar-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