



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



Date 2/22/22

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.
2/22/2022	0	60	10.1		194		18		16		0		6			13		304		164.9	
2/22/2022	1	60	10.0		194		22		17		0		6			13		304		165.7	
2/22/2022	2	60	10.1		194		20		15		0		6			14		306		165.2	
2/22/2022	3	60	10.0		194		8		19		57		6	6		13		302	304	164.4	165.0
2/22/2022	4	60	10.1		195		14		15		9		6			13		304		165.3	
2/22/2022	5	60	10.0		196		19		25		24		5			13		304		167.8	
2/22/2022	6	60	10.4		188		17		19		9		6			13		303		163.6	
2/22/2022	7	60	10.2		193		16		16		2		6	6		13	13	301	303	165.8	165.7
2/22/2022	8	60	10.2		190		23		61		61		7			13		301		164.7	
2/22/2022	9	60	10.2		176		25		91		72		6			13		301		163.8	
2/22/2022	10	60	10.3		195		11		45		76		5			13		305		164.9	
2/22/2022	11	60	10.3		180		15		40		63		4	6		13		304	303	163.5	164.2
2/22/2022	12	60	10.2		195		16		42		62		5			13		305		166.6	
2/22/2022	13	60	10.3		196		11		24		55		4			13		304		167.7	
2/22/2022	14	60	10.2		197		19		33		44		6			14		304		167.1	
2/22/2022	15	60	10.3		197		19		49		62		5	5		14	13	304	304	165.5	166.7
2/22/2022	16	60	10.2		197		14		35		60		5			13		304		164.6	
2/22/2022	17	60	10.0		196		9		28		68		5			13		305		165.0	
2/22/2022	18	60	10.0		196		11		34		68		5			13		304		166.0	
2/22/2022	19	60	10.0		198		14		39		65		4	5		13		304	304	165.6	165.3
2/22/2022	20	60	10.0		196		11		27		58		4			14		304		166.6	
2/22/2022	21	60	10.2		198		12		29		60		5			12		304		164.9	
2/22/2022	22	60	10.3		195		20		50		60		5			13		304		167.5	
2/22/2022	23	60	10.2		192		11		23		53		5	5		13	13	305	304	166.2	166.3

Average:
Geometric Mean Average:

Limit:

193	15
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

49
≥ 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



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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.
2/22/2022	0	60	9.5		192		11		25		57		2			13		305		166.1	
2/22/2022	1	60	9.5		188		11		26		56		1			14		305		165.5	
2/22/2022	2	60	9.4		190		14		28		49		2			14		305		165.5	
2/22/2022	3	60	9.4		191		10		34		72		1	2		14		305	305	165.4	165.6
2/22/2022	4	60	9.3		188		14		38		64		1			13		305		165.5	
2/22/2022	5	60	9.4		182		14		38		63		0			14		305		165.8	
2/22/2022	6	60	9.5		186		9		29		69		1			14		303		164.2	
2/22/2022	7	60	9.6		183		4		32		86		1	1		14	14	302	304	164.9	165.1
2/22/2022	8	60	9.4		186		9		41		79		3			14		302		165.4	
2/22/2022	9	60	9.6		172		25		93		73		2			14		301		166.4	
2/22/2022	10	60	9.6		186		5		46		90		0			14		305		164.9	
2/22/2022	11	60	9.5		187		8		42		80		1	2		14		306	304	162.8	164.9
2/22/2022	12	60	9.4		181		11		46		76		1			14		302		166.3	
2/22/2022	13	60	9.2		187		12		39		69		0			13		303		165.2	
2/22/2022	14	60	9.2		190		6		33		83		1			13		303		166.2	
2/22/2022	15	60	9.2		187		9		44		80		1	1		12	13	301	302	165.7	165.9
2/22/2022	16	60	9.2		193		6		29		79		0			12		305		164.4	
2/22/2022	17	60	9.0		185		5		30		82		0			12		309		165.9	
2/22/2022	18	60	9.1		194		5		35		87		0			15		302		165.4	
2/22/2022	19	60	9.1		191		6		37		84		0	0		14		303	305	165.8	165.4
2/22/2022	20	60	9.2		191		7		37		81		0			14		302		165.4	
2/22/2022	21	60	9.3		189		5		41		87		0			14		297		165.3	
2/22/2022	22	60	9.2		186		13		47		73		0			13		301		165.8	
2/22/2022	23	60	9.2		175		12		35		66		0	0		16	14	303	301	165.7	165.6

Average:
Geometric Mean Average:

Limit:

187	9
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

76
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 22-Feb-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	2	1	1	1	1	1	1	1	1
4	1	1	1	1	1	1	1	2	1	1	1
5	1	1	1	1	1	1	1	1	1	1	1
6	2	IC	6	IC	2	2	2	2	2	2	2
7	2		2		2	2	2	2	2	2	2
8	2		2		2	2	2	2	2	2	2
9	2		2		2	2	2	2	2	2	2
10	2		2		2	2	2	2	2	2	2
11	2		2		2	2	2	2	2	2	2
12	1		1		1	1	1	1	1	1	1
13	2		2		2	1	1	1	1	1	1
14	1		1		1	1	1	1	1	1	1
15	1		1		1	1	1	1	1	1	1
16	1		2		1	1	1	1	1	1	1
17	1		1		1	1	1	1	1	1	1
18	1		1		1	1	1	1	1	1	1
19	2		2		2	2	2	2	2	2	2
20	2		2		2	2	2	2	2	2	2
21	2		2		2	2	2	2	2	2	2
22	2		2		2	2	2	2	2	2	2
23	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-Feb-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	3
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	11	1	15	11	15	11	15	8
12	11	15	11	14	16	6	2	2	2	6	9
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