



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



Date 4/30/22

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.
4/30/2022	0	60	9.6		172		13		40		69		5			14		307		167.3	
4/30/2022	1	60	9.6		176		7		36		81		5			14		300		168.4	
4/30/2022	2	60	9.6		170		12		62		81		4			13		303		169.2	
4/30/2022	3	60	9.8		170		10		50		80		5	5		13		303	303	167.0	168.0
4/30/2022	4	60	9.8		166		12		61		81		5			13		301		167.1	
4/30/2022	5	60	9.9		167		17		46		62		4			13		314		169.6	
4/30/2022	6	60	9.7		162		11		45		75		5			13		306		168.2	
4/30/2022	7	60	9.6		159		6		32		82		6	5		13	13	309	308	166.1	167.7
4/30/2022	8	60	9.7		166		20		63		69		6			13		305		167.2	
4/30/2022	9	60	9.6		166		16		30		47		6			13		314		168.0	
4/30/2022	10	60	9.9		181		10		29		66		4			14		301		169.2	
4/30/2022	11	60	10.1		179		19		28		35		4	5		14		311	308	166.3	167.7
4/30/2022	12	60	9.8		168		15		34		56		6			14		310		168.8	
4/30/2022	13	60	9.8		167		19		38		50		6			13		313		167.9	
4/30/2022	14	60	9.8		168		18		40		55		6			13		309		167.0	
4/30/2022	15	60	9.9		167		15		35		56		5	6		13	13	313	311	166.2	167.5
4/30/2022	16	60	10.0		157		15		75		79		7			13		305		167.3	
4/30/2022	17	60	10.2		165		22		68		68		5			13		302		165.9	
4/30/2022	18	60	10.2		170		22		56		61		6			13		305		166.0	
4/30/2022	19	60	10.0		159		22		51		58		6	6		13		307	305	167.2	166.6
4/30/2022	20	60	9.9		168		19		38		50		5			13		307		167.4	
4/30/2022	21	60	10.0		171		15		32		52		4			14		306		168.0	
4/30/2022	22	60	10.0		171		21		59		63		4			14		303		165.9	
4/30/2022	23	60	9.9		164		15		40		63		4	4		13	13	305	305	166.6	167.0

Average:
Geometric Mean Average:

Limit:

168	15
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

67
≥ 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 4/30/22

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.
4/30/2022	0	60	9.5		195		1		46		99		4			13		310		167.4	
4/30/2022	1	60	9.5		198		0		58		100		4			13		310		168.2	
4/30/2022	2	60	9.6		190		1		62		99		5			13		310		167.5	
4/30/2022	3	60	9.6		194		2		95		98		3	4		14		310	310	167.9	167.8
4/30/2022	4	60	9.6		199		1		86		99		6			15		310		167.9	
4/30/2022	5	60	9.8		193		0		63		100		3			13		310		167.6	
4/30/2022	6	60	9.8		183		0		58		99		2			14		310		168.1	
4/30/2022	7	60	9.6		194		0		45		99		2	3		13	14	310	310	167.5	167.8
4/30/2022	8	60	9.7		186		0		53		100		3			13		310		167.9	
4/30/2022	9	60	9.5		199		0		42		99		2			14		310		167.0	
4/30/2022	10	60	9.6		198		0		35		100		2			13		310		167.7	
4/30/2022	11	60	9.6		190		0		37		99		2	2		13		310	310	167.6	167.6
4/30/2022	12	60	9.6		190		0		46		99		2			13		310		167.3	
4/30/2022	13	60	9.6		204		0		39		99		2			14		310		168.2	
4/30/2022	14	60	9.6		189		0		42		99		2			13		310		165.9	
4/30/2022	15	60	9.6		195		0		58		99		3	2		15	14	310	310	168.1	167.4
4/30/2022	16	60	9.7		193		0		47		99		1			15		310		167.5	
4/30/2022	17	60	9.6		193		0		53		100		2			15		310		167.1	
4/30/2022	18	60	9.5		200		0		50		99		2			14		310		168.4	
4/30/2022	19	60	9.5		193		2		61		98		2	2		14		310	310	167.8	167.7
4/30/2022	20	60	9.5		189		1		53		99		2			14		310		168.2	
4/30/2022	21	60	9.8		197		2		52		97		2			15		310		167.1	
4/30/2022	22	60	9.7		199		1		66		98		2			16		310		167.6	
4/30/2022	23	60	9.7		188		2		66		97		2	2		15	15	310	310	167.2	167.5

Average:
Geometric Mean Average:

Limit:

194	0
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

99
≥ 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 30-Apr-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	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 30-Apr-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	0	0	0	0	0	0	0
1	0	0	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	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	2	IBC	4	IBC	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0
16	0	0	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	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0

Status Flags

I - Invalid C - Calibration F - Offline T - Out of Control ^ - Startup
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown