



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



Date 5/27/22

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.
5/27/2022	0	60	10.2		195		5		43		88		5			14		299		166.5	
5/27/2022	1	60	10.2		195		7		45		85		4			13		299		166.4	
5/27/2022	2	60	10.1		197		6		47		86		4			14		300		168.5	
5/27/2022	3	60	10.2		195		9		48		82		5	4		13		299	299	167.0	167.1
5/27/2022	4	60	10.3		192		4		42		91		4			14		299		167.4	
5/27/2022	5	60	10.2		189		5		30		82		3			13		300		166.0	
5/27/2022	6	60	10.3		188		6		32		81		4			13		299		163.9	
5/27/2022	7	60	10.3		188		5		35		87		4	4		13	13	299	299	165.4	165.7
5/27/2022	8	60	10.3		191		3		34		91		4			14		299		166.2	
5/27/2022	9	60	10.6		182		6		58		90		6			13		299		164.2	
5/27/2022	10	60	10.4		189		3		51		94		3			14		299		167.8	
5/27/2022	11	60	10.3		196		6		62		91		5	4		13		299	299	167.6	166.5
5/27/2022	12	60	10.4		193		4		55		92		4			13		299		168.9	
5/27/2022	13	60	10.5		197		5		56		91		4			14		299		168.5	
5/27/2022	14	60	10.3		197		3		52		94		5			13		299		166.7	
5/27/2022	15	60	10.3		197		5		54		91		4	4		14	14	299	299	166.1	167.6
5/27/2022	16	60	10.2		199		4		52		92		4			13		299		169.1	
5/27/2022	17	60	10.5		195		9		62		86		4			13		304		166.6	
5/27/2022	18	60	10.4		195		9		60		85		4			13		304		169.6	
5/27/2022	19	60	10.0		182		8		69		89		11	6		13		304	303	166.3	167.9
5/27/2022	20	60	10.0		195		11		66		83		3			12		304		167.6	
5/27/2022	21	60	10.0		197		10		63		84		3			13		304		167.9	
5/27/2022	22	60	10.0		194		9		59		84		3			13		304		166.8	
5/27/2022	23	60	10.0		197		11		63		82		3	3		13	13	304	304	167.5	167.4

Average: Geometric Mean Average:	193	6	OR	88	see above	see above	see above	see above
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 ppmc 4-HR Block Average	≤ 12 lb/hr 8-HR. Block Average	≤ 345 °F 4-HR Block Average	≤ 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 5/27/22

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.
5/27/2022	0	60	10.2		197		2		14		84		1			13		307		168.7	
5/27/2022	1	60	10.3		198		3		16		83		1			13		306		168.6	
5/27/2022	2	60	10.4		197		3		16		84		1			14		305		167.7	
5/27/2022	3	60	10.3		195		2		14		82		0	I		15		306	306	169.5	168.6
5/27/2022	4	60	10.2		194		2		9		81		1			15		306		167.9	
5/27/2022	5	60	10.4		198		2		18		91		0			14		300		167.9	
5/27/2022	6	60	10.4		197		2		17		88		0			13		304		167.3	
5/27/2022	7	60	10.3		198		2		15		86		1	I		12	14	308	304	168.2	167.8
5/27/2022	8	60	10.4		195		1		13		89		0			12		303		166.7	
5/27/2022	9	60	10.4		196		2		48		96		1			12		304		165.6	
5/27/2022	10	60	10.5		192		2		42		96		1			12		310		167.0	
5/27/2022	11	60	10.2		197		1		45		97		0	I		12		305	305	168.9	167.0
5/27/2022	12	60	10.0		198		1		36		97		1			13		303		168.3	
5/27/2022	13	60	10.2		198		1		49		97		0			16		299		168.1	
5/27/2022	14	60	10.1		196		1		38		97		0			18		300		167.1	
5/27/2022	15	60	9.8		199		2		50		96		1	I		16	14	313	304	168.4	168.0
5/27/2022	16	60	10.1		196		2		33		95		0			16		314		167.5	
5/27/2022	17	60	10.0		198		1		42		97		1			17		305		166.3	
5/27/2022	18	60	10.0		196		2		38		96		0			16		311		167.9	
5/27/2022	19	60	9.7		197		2		46		96		0	0		16		310	310	168.9	167.6
5/27/2022	20	60	9.8		196		2		46		96		0			16		310		168.3	
5/27/2022	21	60	9.9		199		2		40		96		0			17		310		168.7	
5/27/2022	22	60	9.9		197		2		40		95		1			16		310		167.9	
5/27/2022	23	60	10.1		198		1		34		96		1	0		16	16	310	310	166.4	167.8

Average:
Geometric Mean Average:

Limit:

197	2
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

94
≥ 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 27-May-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 27-May-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	1	1	1	1	1	0
1	1	0	0	0	0	0	0	1	1	0	0
2	1	1	0	0	0	0	0	1	1	0	0
3	1	1	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	1	0	0	0	0
6	2	IBC	5	IBC	0	0	0	1	0	0	1
7	0	0	0	0	0	0	0	0	1	0	0
8	1	1	1	0	0	1	1	1	1	1	0
9	1	1	1	1	1	1	0	0	0	1	0
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	0	1	1	1	1	1	1	1	0
15	1	1	0	0	0	0	0	0	0	0	0
16	0	1	1	0	0	0	0	0	0	0	0
17	0	0	0	1	1	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	1	0	0	0	0	0	0	0	0	0	0
23	0	0	0	1	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