



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



Date 6/4/22

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.
6/4/2022	0	60	10.0		195		6		38		85		4			13		304		167.6	
6/4/2022	1	60	10.1		191		10		46		79		4			13		304		167.6	
6/4/2022	2	60	10.1		199		9		34		74		3			13		304		167.8	
6/4/2022	3	60	10.0		196		10		41		75		4	4		13		304	304	169.6	168.2
6/4/2022	4	60	10.1		198		14		47		70		5			13		304		167.0	
6/4/2022	5	60	10.1		199		15		43		66		5			13		305		167.3	
6/4/2022	6	60	10.2		197		17		51		67		4			13		304		167.3	
6/4/2022	7	60	10.1		197		12		41		70		4	4		13	13	304	304	166.5	167.0
6/4/2022	8	60	9.9		195		8		41		79		5			14		304		166.8	
6/4/2022	9	60	10.4		193		14		45		68		4			13		304		164.8	
6/4/2022	10	60	10.4		195		18		54		67		3			13		305		165.7	
6/4/2022	11	60	10.2		194		9		37		76		7	4		13		305	304	165.5	165.7
6/4/2022	12	60	9.7		184		13		45		72		7			13		305		168.7	
6/4/2022	13	60	10.4		196		19		49		62		5			13		304		167.7	
6/4/2022	14	60	10.2		198		15		41		63		5			13		304		166.0	
6/4/2022	15	60	10.3		197		13		37		66		4	5		13	13	304	304	166.0	167.1
6/4/2022	16	60	10.3		195		25		86		71		4			14		304		167.2	
6/4/2022	17	60	10.3		195		15		53		72		4			13		304		164.7	
6/4/2022	18	60	10.5		196		25		74		67		4			13		304		166.7	
6/4/2022	19	60	10.1		197		19		59		68		4	4		13		305	304	169.5	167.0
6/4/2022	20	60	10.2		197		18		67		73		4			13		304		168.6	
6/4/2022	21	60	10.2		194		8		36		77		4			13		304		165.0	
6/4/2022	22	60	10.3		196		12		37		68		3			14		304		166.8	
6/4/2022	23	60	10.3		195		13		43		70		3	4		14	13	304	304	165.9	166.6

Average:
Geometric Mean Average:

Limit:

195	13
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

72
≥ 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 6/4/22

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.
6/4/2022	0	60	10.0		197		8		28		73		1			14		313		167.4	
6/4/2022	1	60	10.1		195		9		31		72		1			14		311		166.3	
6/4/2022	2	60	10.0		194		8		26		68		1			14		310		168.0	
6/4/2022	3	60	10.0		199		8		29		72		0	I		13		306	310	167.6	167.3
6/4/2022	4	60	10.0		194		5		29		82		2			13		302		167.3	
6/4/2022	5	60	10.0		198		10		36		73		0			13		302		167.7	
6/4/2022	6	60	10.1		197		10		31		67		0			13		307		167.4	
6/4/2022	7	60	10.1		198		12		30		60		1	I		13	14	308	305	167.9	167.6
6/4/2022	8	60	10.0		197		9		21		57		1			13		312		163.7	
6/4/2022	9	60	9.9		197		14		25		43		1			13		311		166.5	
6/4/2022	10	60	10.0		196		10		22		54		1			13		313		168.5	
6/4/2022	11	60	9.9		198		20		33		39		2	I		13		316	313	166.7	166.4
6/4/2022	12	60	9.8		195		16		29		45		2			13		319		167.0	
6/4/2022	13	60	9.7		196		6		27		77		1			13		309		167.3	
6/4/2022	14	60	9.9		198		7		25		71		1			13		303		167.3	
6/4/2022	15	60	9.9		194		7		22		68		1	I		16	14	305	309	168.0	167.4
6/4/2022	16	60	10.1		192		26		55		52		1			16		308		168.2	
6/4/2022	17	60	9.9		198		15		35		57		0			15		314		167.1	
6/4/2022	18	60	10.1		196		33		56		42		1			16		313		169.3	
6/4/2022	19	60	10.0		197		15		40		62		2	I		16		310	311	165.1	167.4
6/4/2022	20	60	9.9		196		30		79		62		1			15		310		165.8	
6/4/2022	21	60	10.0		197		14		47		70		0			14		305		166.4	
6/4/2022	22	60	9.8		185		11		32		66		0			14		310		171.7	
6/4/2022	23	60	10.1		196		11		32		67		1	I		14	15	308	308	165.4	167.3

Average: Geometric Mean Average:	196	12	OR	64	see above	see above	see above	see above			
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 4-HR Block Average	ppmc	≤ 12 8-HR. Block Average	lb/hr	≤ 345 °F 4-HR Block Average	≤ 173 4-HR Block Average	klb/hr

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 04-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 04-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	0	1	1	1	1	1	1	1	0	1	0
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	0	1	1	0	1	1	1	1	1	1	0
17	1	1	1	1	0	1	1	0	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