



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



Date 5/31/22

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.
5/31/2022	0	60	10.3		143		14		60		77		5			13		304		164.3	
5/31/2022	1	60	10.4		158		16		68		77		4			13		304		162.5	
5/31/2022	2	60	10.6		192		20		68		70		3			13		304		162.1	
5/31/2022	3	60	10.4		189		20		64		69		2	4		13		305	304	166.9	164.0
5/31/2022	4	60	10.3		185		18		66		72		3			13		304		169.3	
5/31/2022	5	60	10.3		188		21		73		71		3			14		305		165.8	
5/31/2022	6	60	10.2		188		20		71		72		3			13		304		168.1	
5/31/2022	7	60	10.2		189		20		63		68		4	3		13	13	304	304	167.1	167.6
5/31/2022	8	60	10.3		164		18		65		73		4			13		304		162.5	
5/31/2022	9	60	10.4		181		19		77		76		3			14		308		165.4	
5/31/2022	10	60	10.4		192		20		71		71		3			13		302		165.8	
5/31/2022	11	60	10.6		192		15		50		71		2	3		13		306	305	165.4	164.8
5/31/2022	12	60	10.6		185		10		45		77		4			13		307		162.1	
5/31/2022	13	60	10.5		179		14		46		69		4			13		311		164.7	
5/31/2022	14	60	10.4		185		16		65		75		5			14		308		166.1	
5/31/2022	15	60	10.3		179		6		39		84		5	5		13	13	305	308	165.3	164.5
5/31/2022	16	60	10.4		187		4		35		89		4			13		304		165.5	
5/31/2022	17	60	10.6		182		6		40		84		4			13		304		163.3	
5/31/2022	18	60	10.4		185		9		48		80		3			13		304		167.9	
5/31/2022	19	60	10.5		190		11		44		75		3	4		14		304	304	164.6	165.3
5/31/2022	20	60	10.5		190		7		36		81		3			14		304		167.3	
5/31/2022	21	60	10.2		186		5		38		88		3			13		304		166.0	
5/31/2022	22	60	10.2		190		5		38		86		3			13		304		166.5	
5/31/2022	23	60	10.2		183		5		38		87		3	3		13	13	304	304	165.0	166.2

Average: Geometric Mean Average:	183	12	OR	78	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 5/31/22

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.
5/31/2022	0	60	9.8		189		0		39		99		1			14		310		162.7	
5/31/2022	1	60	9.3		182		1		67		99		3			14		310		171.9	
5/31/2022	2	60	9.8		176		1		59		98		1			14		310		165.7	
5/31/2022	3	60	10.0		184		1		45		98		1	I		14		313	311	164.7	166.3
5/31/2022	4	60	9.6		185		1		40		97		1			14		315		169.0	
5/31/2022	5	60	10.0		179		1		41		97		1			14		306		165.4	
5/31/2022	6	60	9.9		188		1		47		98		0			14		308		166.2	
5/31/2022	7	60	10.2		194		1		42		98		0	I		14	14	301	308	164.8	166.4
5/31/2022	8	60	10.2		194		1		23		96		1			14		310		165.7	
5/31/2022	9	60	10.2		198		1		17		95		1			14		313		163.9	
5/31/2022	10	60	10.2		192		1		26		92		2			14		315		167.0	
5/31/2022	11	60	10.3		191		1		38		98		0	I		14		309	312	165.5	165.5
5/31/2022	12	60	10.6		191		1		17		95		0			14		315		162.0	
5/31/2022	13	60	10.3		197		1		31		98		0			14		305		166.8	
5/31/2022	14	60	10.3		192		1		32		98		1			14		306		166.9	
5/31/2022	15	60	10.4		192		1		32		98		1	I		14	14	305	308	164.9	165.2
5/31/2022	16	60	10.6		193		1		21		96		1			14		308		160.9	
5/31/2022	17	60	10.4		191		1		47		98		1			14		313		163.8	
5/31/2022	18	60	10.3		193		1		25		98		0			14		308		164.1	
5/31/2022	19	60	10.3		192		1		20		97		0	O		14		309	310	166.0	163.7
5/31/2022	20	60	10.2		193		1		24		97		0			14		304		166.3	
5/31/2022	21	60	10.2		196		1		23		97		0			14		309		165.2	
5/31/2022	22	60	10.2		197		1		25		97		0			14		316		166.3	
5/31/2022	23	60	10.2		198		1		21		97		0	O		15	14	320	312	165.6	165.8

Average:
Geometric Mean Average:

Limit:

191	1
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

98
≥ 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 31-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 31-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	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	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	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	1	1	1	0	1	0	0	0	0	0	0
11	0	0	0	0	0	1	1	0	0	1	0
12	0	0	0	1	1	1	1	1	1	1	0
13	1	1	1	1	1	1	1	0	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	1	1	1	1	1	1	1	1	1	1	1
17	1	1	1	1	1	1	1	1	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