



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



Date 7/23/22

Wheel Plant Wheelabrator North Andover
Unit 1 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.
7/23/2022	0	60	9.6		142		9		82		90		6			13		302		164.1	
7/23/2022	1	60	9.7		153		11		72		85		4			13		299		165.5	
7/23/2022	2	60	9.5		154		18		89		79		5			13		303		165.6	
7/23/2022	3	60	9.5		149		15		70		78		5	5		14		306	302	167.2	165.6
7/23/2022	4	60	9.5		153		19		75		75		4			13		307		165.7	
7/23/2022	5	60	9.6		153		13		63		80		5			14		308		165.6	
7/23/2022	6	60	9.3		148		15		76		80		6			14		312		164.5	
7/23/2022	7	60	9.8		165		18		71		74		6	5		13	14	310	309	159.9	163.9
7/23/2022	8	60	10.8		151		12		90		86		9			14		297		141.7	
7/23/2022	9	60	10.8		138		17		82		79		11			13		305		133.2	
7/23/2022	10	60	10.8		143		57		205		72		11			13		313		132.5	
7/23/2022	11	60	10.7		135		27		134		80		10	10		13		319	309	134.6	135.5
7/23/2022	12	60	10.7		130		25		124		80		8			14		308		134.6	
7/23/2022	13	60	10.7		129		21		108		81		8			14		305		133.1	
7/23/2022	14	60	10.8		140		31		143		78		7			14		311		133.3	
7/23/2022	15	60	10.6		137		24		113		79		6	7		13	14	313	309	133.7	133.7
7/23/2022	16	60	10.6		134		22		102		79		6			13		313		134.3	
7/23/2022	17	60	10.7		145		24		99		76		5			13		313		136.2	
7/23/2022	18	60	11.0		147		26		112		77		8			13		316		135.0	
7/23/2022	19	60	11.2		141		17		100		83		11	7		14		307	312	131.5	134.3
7/23/2022	20	60	10.9		142		14		70		79		8			13		304		132.7	
7/23/2022	21	60	10.7		135		17		69		75		8			13		308		135.3	
7/23/2022	22	60	10.7		137		11		53		79		7			13		307		133.6	
7/23/2022	23	60	10.7		129		10		60		84		5	7		14	13	305	306	136.4	134.5

Average:
Geometric Mean Average:

Limit:

143	18
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

80
≥ 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 7/23/22

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.
7/23/2022	0	60	10.2		183		23		94		75		2			14		310		162.7	
7/23/2022	1	60	10.3		170		16		66		76		2			15		311		164.0	
7/23/2022	2	60	10.3		174		18		69		74		2			13		310		164.5	
7/23/2022	3	60	10.3		178		20		55		64		2	2		13		317	312	163.8	163.8
7/23/2022	4	60	10.8		172		5		45		90		3			13		311		160.3	
7/23/2022	5	60	10.4		172		5		50		91		2			14		306		164.7	
7/23/2022	6	60	10.5		183		7		52		86		2			13		307		163.1	
7/23/2022	7	60	10.7		188		20		73		72		3	3		13	13	310	308	162.9	162.8
7/23/2022	8	60	10.7		176		24		90		73		6			13		311		164.3	
7/23/2022	9	60	10.3		183		22		47		53		3			15		316		166.3	
7/23/2022	10	60	10.4		180		19		69		73		3			13		313		164.7	
7/23/2022	11	60	10.0		184		38		137		72		5	4		13		313	313	168.9	166.0
7/23/2022	12	60	10.0		178		27		114		77		2			13		311		167.8	
7/23/2022	13	60	10.0		185		23		95		76		1			13		311		168.2	
7/23/2022	14	60	9.9		173		18		98		81		1			14		310		166.8	
7/23/2022	15	60	9.8		183		22		95		76		1	2		13	13	309	310	170.6	168.3
7/23/2022	16	60	10.2		179		23		93		75		2			10		311		165.3	
7/23/2022	17	60	10.4		175		23		75		70		2			15		310		165.9	
7/23/2022	18	60	10.4		172		26		88		70		4			14		317		167.5	
7/23/2022	19	60	10.3		178		18		90		80		4	3		12		305	311	168.5	166.8
7/23/2022	20	60	10.1		182		21		73		71		5			14		304		168.8	
7/23/2022	21	60	10.3		182		16		56		72		4			14		306		168.6	
7/23/2022	22	60	10.8		188		22		54		59		4			13		316		166.2	
7/23/2022	23	60	10.0		173		16		59		73		3	4		13	13	309	309	170.3	168.5

Average:
Geometric Mean Average:

Limit:

179	18
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

76
≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

see above
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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 23-Jul-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	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	IC	5	IC	1	1	1	1	1	1	2
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	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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 23-Jul-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	1	1	1	2	1	2
1	2	1	1	1	1	2	1	1	1	2	1
2	1	1	1	2	2	2	2	2	2	2	1
3	2	2	2	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	2	2	1	1	2	2	1
6	1	IBC	6	IBC	2	2	2	2	2	2	2
7	2	2	2	2	2	2	1	1	2	2	2
8	1	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	1	2	1	2	1	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	1	2	2	2	2	2	2
18	2	2	2	2	2	2	2	2	2	2	2
19	2	1	1	1	2	1	1	1	1	1	1
20	2	2	1	2	2	1	1	2	2	1	1
21	1	2	2	1	1	1	1	1	1	1	1
22	2	2	2	1	1	1	1	1	1	1	1
23	1	1	1	2	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