



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



Date 8/6/22

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.
8/6/2022	0	60	9.7		183		17		91		82		3			13		309		167.0	
8/6/2022	1	60	9.9		184		14		84		83		4			13		310		164.3	
8/6/2022	2	60	9.5		183		10		72		86		4			13		310		166.5	
8/6/2022	3	60	9.6		180		11		83		86		4	4		13		309	309	167.2	166.3
8/6/2022	4	60	9.6		176		10		74		86		4			13		310		165.8	
8/6/2022	5	60	9.7		180		11		70		84		5			13		309		164.3	
8/6/2022	6	60	9.6		176		9		63		86		4			13		309		165.6	
8/6/2022	7	60	9.9		175		8		55		85		3	4		13	13	310	310	165.6	165.3
8/6/2022	8	60	9.7		171		6		78		92		4			13		309		167.7	
8/6/2022	9	60	10.0		182		14		106		87		4			13		308		165.6	
8/6/2022	10	60	10.0		187		11		76		85		3			13		310		166.9	
8/6/2022	11	60	10.0		190		11		61		82		3	3		13		316	311	167.0	166.8
8/6/2022	12	60	10.0		188		10		53		81		3			13		311		165.6	
8/6/2022	13	60	9.9		189		15		67		77		4			13		313		166.8	
8/6/2022	14	60	10.0		185		20		83		76		3			13		308		166.4	
8/6/2022	15	60	9.9		188		21		78		73		4	4		13	13	310	311	167.5	166.6
8/6/2022	16	60	10.0		180		19		74		74		4			13		310		166.2	
8/6/2022	17	60	10.0		182		8		67		88		4			13		306		164.6	
8/6/2022	18	60	10.1		184		12		89		86		3			13		301		165.1	
8/6/2022	19	60	10.1		185		20		90		77		3	3		13		300	304	165.3	165.3
8/6/2022	20	60	10.0		182		17		80		79		4			13		300		164.2	
8/6/2022	21	60	10.0		190		17		59		71		3			13		314		164.9	
8/6/2022	22	60	10.0		189		17		52		68		3			13		309		164.7	
8/6/2022	23	60	9.7		183		23		79		71		3	3		13	13	315	310	167.1	165.2

Average:
Geometric Mean Average:

Limit:

183	13
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

82
≥ 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 8/6/22

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.
8/6/2022	0	60	10.5		164		21		93		78		3			14		310		164.3	
8/6/2022	1	60	10.3		162		8		53		86		4			13		310		166.3	
8/6/2022	2	60	10.2		163		5		44		89		4			14		310		165.2	
8/6/2022	3	60	10.4		152		4		43		91		4	4		14		310	310	165.9	165.4
8/6/2022	4	60	10.1		169		14		61		77		3			14		310		167.3	
8/6/2022	5	60	10.2		177		10		31		68		2			14		310		164.1	
8/6/2022	6	60	10.3		172		7		24		70		2			14		310		165.0	
8/6/2022	7	60	10.3		167		14		46		70		3	2		13	14	310	310	166.2	165.6
8/6/2022	8	60	10.2		159		11		45		76		3			13		310		166.8	
8/6/2022	9	60	10.2		155		18		67		72		3			13		310		166.7	
8/6/2022	10	60	10.2		157		17		61		73		3			14		310		165.1	
8/6/2022	11	60	10.4		163		14		40		66		4	3		14		310	310	165.3	166.0
8/6/2022	12	60	10.3		160		5		27		80		2			13		310		163.8	
8/6/2022	13	60	10.0		149		6		35		82		13			14		310		166.0	
8/6/2022	14	60	9.8		153		12		48		74		12			14		310		164.0	
8/6/2022	15	60	10.2		168		7		44		83		1	7		14	14	304	308	164.5	164.6
8/6/2022	16	60	10.4		177		20		62		67		2			14		316		168.2	
8/6/2022	17	60	10.4		180		7		40		83		2			14		305		164.3	
8/6/2022	18	60	10.8		168		9		47		80		2			14		306		160.7	
8/6/2022	19	60	10.1		162		22		70		68		2	2		14		316	311	170.1	165.8
8/6/2022	20	60	10.5		166		9		68		87		3			14		303		163.1	
8/6/2022	21	60	10.5		154		20		78		74		7			14		308		161.0	
8/6/2022	22	60	10.4		156		22		67		67		3			13		316		163.9	
8/6/2022	23	60	10.5		166		21		52		59		1	4		14	14	314	310	162.9	162.7

Average:
Geometric Mean Average:

Limit:

163	11
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

77
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≥ 12 8-HR. Block Average

see above
≤ 345 °F 4-HR Block Average

see above
≤ 173 4-HR Block Average

klb/hr

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 06-Aug-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	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	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 06-Aug-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	5	IBC	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	1	1	0	0
17	0	1	1	1	1	0	0	0	0	0	0
18	1	1	1	1	1	1	1	1	1	1	1
19	1	1	1	1	1	0	0	0	0	0	0
20	1	1	1	1	0	0	0	0	0	0	0
21	1	1	1	1	1	1	0	0	0	1	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