



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



Date 8/5/22

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.
8/5/2022	0	60	9.9		190		10		51		80		4			13		310		166.2	
8/5/2022	1	60	9.8		188		39		100		61		4			13		309		166.2	
8/5/2022	2	60	10.0		185		30		90		67		4			13		309		162.8	
8/5/2022	3	60	9.9		181		31		81		62		4	4		13		310	309	166.3	165.4
8/5/2022	4	60	9.8		185		7		50		87		4			13		309		163.6	
8/5/2022	5	60	9.6		191		2		35		93		5			13		309		163.6	
8/5/2022	6	60	9.7		189		3		31		89		6			13		309		159.8	
8/5/2022	7	60	10.0		192		5		29		82		5	5		13	13	310	310	166.2	163.3
8/5/2022	8	60	9.9		194		5		35		85		5			13		308		165.2	
8/5/2022	9	60	10.2		192		21		67		69		4			13		309		166.3	
8/5/2022	10	60	10.1		192		26		72		64		4			13		310		164.5	
8/5/2022	11	60	9.8		195		8		54		86		5	5		13		309	309	167.0	165.7
8/5/2022	12	60	9.9		197		4		44		91		5			13		310		166.2	
8/5/2022	13	60	10.0		195		7		56		87		4			13		310		165.4	
8/5/2022	14	60	9.7		194		5		58		91		4			13		309		165.4	
8/5/2022	15	60	9.7		194		12		68		82		4	4		13	13	309	309	165.6	165.7
8/5/2022	16	60	9.6		188		6		49		89		4			13		310		166.6	
8/5/2022	17	60	9.7		182		5		50		90		4			13		309		165.1	
8/5/2022	18	60	9.6		182		6		52		88		4			13		309		164.3	
8/5/2022	19	60	9.8		195		36		131		72		4	4		13		310	309	165.6	165.4
8/5/2022	20	60	9.7		190		22		103		79		4			13		309		165.7	
8/5/2022	21	60	9.6		187		10		67		85		4			13		310		165.8	
8/5/2022	22	60	9.8		184		6		60		90		4			13		310		163.5	
8/5/2022	23	60	9.6		188		6		59		90		4	4		13	13	309	309	165.7	165.2

Average: Geometric Mean Average:	190	9	OR	84	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

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 8/5/22

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.
8/5/2022	0	60	10.2		161		11		40		73		3			13		310		165.5	
8/5/2022	1	60	10.2		162		16		62		74		3			14		310		166.4	
8/5/2022	2	60	10.3		164		18		72		75		3			14		311		166.6	
8/5/2022	3	60	10.3		156		13		48		72		5	4		14		310	310	165.8	166.1
8/5/2022	4	60	10.2		154		9		39		77		5			14		310		166.3	
8/5/2022	5	60	10.1		165		6		16		65		4			13		310		164.2	
8/5/2022	6	60	10.3		170		8		9		7		4			13		310		166.8	
8/5/2022	7	60	10.9		170		10		12		11		8	5		13	13	310	310	164.7	165.5
8/5/2022	8	60	10.5		176		7		13		45		6			13		310		160.5	
8/5/2022	9	60	10.4		160		18		48		63		6			13		310		166.0	
8/5/2022	10	60	10.4		160		13		39		67		14			14		310		164.8	
8/5/2022	11	60	10.4		163		3		11		70		5	8		14		310	310	165.8	164.3
8/5/2022	12	60	10.2		159		5		25		82		6			14		310		166.9	
8/5/2022	13	60	10.3		181		8		39		81		110			13		310		164.8	
8/5/2022	14	60	10.3		169		8		44		82		5			14		309		162.2	
8/5/2022	15	60	10.0		172		5		36		85		4	31		13	13	310	310	163.3	164.3
8/5/2022	16	60	10.2		162		7		40		82		3			13		310		163.2	
8/5/2022	17	60	10.1		170		7		35		80		3			14		310		164.1	
8/5/2022	18	60	10.0		160		7		38		81		3			13		310		165.9	
8/5/2022	19	60	10.1		172		17		72		76		3	3		13		310	310	166.3	164.9
8/5/2022	20	60	10.2		165		17		61		72		4			14		310		164.9	
8/5/2022	21	60	10.2		164		8		40		80		4			14		310		165.5	
8/5/2022	22	60	10.3		165		7		43		84		4			14		310		164.8	
8/5/2022	23	60	10.2		160		7		50		86		3	4		14	14	310	310	165.6	165.2

Average:
Geometric Mean Average:

Limit:

165	9
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

74
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≥ 12 8-HR. Block Average

lb/hr

see above
≤ 345 °F 4-HR Block Average

°F

see above
≤ 173 4-HR Block Average

klb/hr

Status Flags

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 05-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	0	1	1	1	0	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 05-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	1	IBC	5	IBC	0	1	1	1	1	1	1
7	1		1		1	1	1	1	1	1	1
8	1		1		1	1	1	1	1	1	1
9	1		1		1	1	1	1	1	1	1
10	0		0		0	0	1	1	1	0	0
11	1		1		0	1	1	1	0	1	0
12	0		1		1	1	1	1	1	1	0
13	1		1		1	1	1	0	0	1	1
14	0		0		0	0	0	0	0	0	0
15	0		0		0	0	1	0	1	1	0
16	0		1		0	0	1	1	1	0	0
17	1		0		0	0	0	0	0	0	0
18	0		0		0	0	0	0	0	0	0
19	0		0		0	0	0	0	0	0	0
20	0		0		0	0	0	0	0	0	0
21	0		0		0	0	0	0	0	0	0
22	0		0		0	0	0	0	0	0	0
23	0		0		0	0	1	0	0	1	0

Status Flags

I - Invalid C - Calibration F - Offline T - Out of Control ^ - Startup
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown