



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



Date 11/9/22

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.
11/9/2022	0	60	10.6		189		2		35		94		6			13		309		166.2	
11/9/2022	1	60	10.9		194		8		51		85		5			13		309		165.6	
11/9/2022	2	60	10.6		196		5		39		87		5			13		310		165.3	
11/9/2022	3	60	10.6		193		7		39		83		5	5		13		310	309	166.0	165.8
11/9/2022	4	60	10.7		190		10		40		74		5			13		309		167.1	
11/9/2022	5	60	11.0		194		17		44		60		5			13		309		162.4	
11/9/2022	6	60	10.9		189		54		76		29		5			13		310		167.5	
11/9/2022	7	60	10.8		179		41		55		24		6	6		13	13	309	309	162.7	164.9
11/9/2022	8	60	10.7		169		30		41		26		6			13		309		166.9	
11/9/2022	9	60	11.1		185		26		58		55		9			13		312		164.0	
11/9/2022	10	60	10.7		187		38		47		18		5			13		310		164.7	
11/9/2022	11	60	10.9		178		21		35		40		6	6		13		309	310	166.4	165.5
11/9/2022	12	60	10.8		197		11		36		70		5			14		310		165.8	
11/9/2022	13	60	10.8		197		66		77		14		7			14		309		165.8	
11/9/2022	14	60	10.5		198		9		35		74		6			14		310		165.1	
11/9/2022	15	60	10.5		198		15		36		59		6	6		14	13	310	309	167.3	166.0
11/9/2022	16	60	10.5		196		12		29		61		5			14		309		167.9	
11/9/2022	17	60	10.6		193		5		18		75		4			13		309		164.9	
11/9/2022	18	60	10.4		199		12		27		55		5			14		310		166.8	
11/9/2022	19	60	10.7		198		7		26		74		4	4		14		309	309	166.0	166.4
11/9/2022	20	60	10.8		199		8		26		71		4			13		309		165.5	
11/9/2022	21	60	10.6		199		16		39		59		5			13		310		167.1	
11/9/2022	22	60	10.6		196		19		58		68		4			14		310		166.5	
11/9/2022	23	60	10.9		195		14		42		66		5	4		13	14	309	309	163.9	165.7

Average:
Geometric Mean Average:

Limit:

192	14
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

66
≥ 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

- 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 11/9/22

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.
11/9/2022	0	60	10.6		196		7		28		76		2			13		310		165.5	
11/9/2022	1	60	10.5		197		6		26		78		1			12		310		166.9	
11/9/2022	2	60	10.6		196		4		19		77		1			13		310		166.6	
11/9/2022	3	60	10.6		194		6		26		75		1	1		12		310	310	166.3	166.3
11/9/2022	4	60	10.6		196		7		23		69		4			12		310		165.9	
11/9/2022	5	60	10.8		196		10		25		60		2			13		310		165.1	
11/9/2022	6	60	10.9		192		27		56		52		3			13		310		166.6	
11/9/2022	7	60	10.6		194		22		47		53		4	3		13	13	310	310	164.5	165.5
11/9/2022	8	60	10.7		190		18		20		8		3			13		310		165.5	
11/9/2022	9	60	10.8		194		25		32		20		4			13		310		167.1	
11/9/2022	10	60	10.6		193		16		20		22		4			13		310		166.8	
11/9/2022	11	60	10.8		194		9		14		40		4	4		13		310	310	165.7	166.3
11/9/2022	12	60	11.8		188		7		17		59		3			13		309		158.1	
11/9/2022	13	60	10.5		183		10		31		68		2			14		310		165.8	
11/9/2022	14	60	10.3		194		15		28		48		3			13		310		165.9	
11/9/2022	15	60	10.5		195		19		34		46		3	3		13	13	310	310	166.1	164.0
11/9/2022	16	60	10.5		192		18		23		22		2			13		310		166.7	
11/9/2022	17	60	10.1		192		9		16		46		2			13		310		166.8	
11/9/2022	18	60	10.2		194		6		12		44		3			13		310		166.0	
11/9/2022	19	60	10.3		189		6		16		60		2	3		13		310	310	167.7	166.8
11/9/2022	20	60	10.4		194		6		13		59		2			14		310		166.0	
11/9/2022	21	60	10.6		192		8		20		58		2			13		310		166.3	
11/9/2022	22	60	10.7		188		16		34		52		3			13		310		165.8	
11/9/2022	23	60	10.7		191		14		34		58		3	3		13	13	310	310	166.9	166.2

Average: Geometric Mean Average:	193	11	OR	55	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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 09-Nov-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	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0
1	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0
2	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0
3	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0
4	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0
5	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0
6	0	CM	0	CM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0
7	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0
8	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0
9	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0
10	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0	IM	0
11	0	IM	1	IM	1	IM	1	IM	1	IM	30	IM	9	IM	1	IM	23	CM	30	CM	11
12	1	CM	2	CM	22	CM	2		1		2		2		2		1		2		4
13	2		1		2	IC	6	IC	5	IC	2		2		2		1		2		2
14	2		2		1		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 09-Nov-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	1	1	1	1	2	1	2	1	1
1	2	1	1	1	1	1	1	1	2	1	1
2	2	2	2	1	1	1	1	1	1	1	1
3	1	1	1	2	1	1	1	1	2	1	1
4	1	1	1	1	1	2	1	1	1	2	1
5	1	1	1	1	1	1	1	1	1	1	1
6	2	IBC	5	IBC	1	1	1	1	1	1	2
7	2	2	2	1	1	1	1	1	1	1	1
8	1	1	1	1	1	1	1	1	2	1	1
9	2	2	2	1	2	1	1	1	1	1	1
10	1	1	1	1	2	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	2	2	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	2	2	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	2	1	1
19	2	2	2	1	1	1	2	1	1	1	1
20	1	1	1	1	1	1	1	1	1	1	1
21	2	1	1	1	1	1	2	1	1	1	1
22	1	1	1	2	2	2	2	1	1	2	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