



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



Date 11/27/22

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.
11/27/2022	0	60	10.5		199		7		38		82		5			13		310		164.8	
11/27/2022	1	60	10.4		197		12		55		77		4			13		310		165.1	
11/27/2022	2	60	10.4		194		10		47		79		5			13		309		167.3	
11/27/2022	3	60	10.4		196		6		41		86		5	5		13		310	310	166.6	166.0
11/27/2022	4	60	10.3		190		4		38		89		3			13		309		164.9	
11/27/2022	5	60	10.3		198		7		49		86		3			13		310		165.9	
11/27/2022	6	60	10.1		192		9		47		82		4			13		308		168.3	
11/27/2022	7	60	10.2		195		13		55		77		3	3		14	13	310	309	167.9	166.8
11/27/2022	8	60	10.0		185		14		56		75		4			13		309		166.7	
11/27/2022	9	60	10.5		194		9		35		74		4			13		310		166.0	
11/27/2022	10	60	10.3		190		9		37		77		5			13		309		165.9	
11/27/2022	11	60	10.3		193		16		55		71		5	5		13		309	309	166.8	166.3
11/27/2022	12	60	10.6		187		10		52		81		4			13		307		159.6	
11/27/2022	13	60	10.6		177		6		46		87		4			13		312		151.0	
11/27/2022	14	60	10.5		194		6		42		85		4			13		309		163.1	
11/27/2022	15	60	10.4		199		8		43		82		5	4		13	13	310	310	166.9	160.2
11/27/2022	16	60	10.6		195		7		44		84		5			13		310		165.0	
11/27/2022	17	60	10.3		191		5		40		86		4			13		309		165.3	
11/27/2022	18	60	10.4		193		6		40		84		4			13		310		166.7	
11/27/2022	19	60	10.7		185		8		49		84		4	4		13		308	309	166.7	165.9
11/27/2022	20	60	10.5		178		17		79		78		4			14		309		164.1	
11/27/2022	21	60	10.6		192		7		42		84		3			14		311		168.1	
11/27/2022	22	60	10.4		188		8		44		81		3			14		308		165.5	
11/27/2022	23	60	10.6		195		10		40		75		4	4		14	14	310	309	164.8	165.6

Average:
Geometric Mean Average:

Limit:

192	8
≤ 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 11/27/22

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.
11/27/2022	0	60	10.3		190		18		55		68		2			14		310		166.7	
11/27/2022	1	60	10.4		187		11		42		74		2			14		310		165.9	
11/27/2022	2	60	10.2		192		8		43		81		2			14		310		166.7	
11/27/2022	3	60	10.3		190		14		55		74		2	2		14		310	310	166.7	166.5
11/27/2022	4	60	10.3		185		8		41		80		3			14		310		165.4	
11/27/2022	5	60	10.2		194		7		31		79		4			14		310		167.1	
11/27/2022	6	60	10.3		190		7		28		73		1			14		310		164.9	
11/27/2022	7	60	10.1		192		7		26		74		1	2		14	14	310	310	166.7	166.0
11/27/2022	8	60	10.3		184		10		32		70		1			14		309		166.2	
11/27/2022	9	60	10.4		187		14		37		63		1			14		310		166.1	
11/27/2022	10	60	10.3		184		18		45		60		1			14		310		166.7	
11/27/2022	11	60	10.3		174		19		57		67		1	1		14		310	310	166.4	166.4
11/27/2022	12	60	10.6		177		17		52		67		1			14		309		157.0	
11/27/2022	13	60	10.6		169		7		38		81		1			14		310		151.5	
11/27/2022	14	60	10.2		180		6		37		83		1			14		310		165.0	
11/27/2022	15	60	10.3		182		5		25		80		1	1		14	14	310	310	166.4	160.0
11/27/2022	16	60	10.1		181		4		22		83		0			14		310		165.8	
11/27/2022	17	60	10.3		172		6		30		81		0			14		310		165.1	
11/27/2022	18	60	10.1		185		7		33		78		0			14		310		166.3	
11/27/2022	19	60	10.1		170		12		45		74		1	1		14		310	310	164.9	165.5
11/27/2022	20	60	10.0		178		8		36		78		0			14		310		166.3	
11/27/2022	21	60	10.0		179		9		38		78		1			14		310		167.6	
11/27/2022	22	60	10.0		174		7		32		78		1			14		310		166.5	
11/27/2022	23	60	10.1		177		10		36		72		1	1		14	14	310	310	166.5	166.7

Average: Geometric Mean Average:	182	9	OR	76	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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 27-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	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	3	2	2
3	2	2	2	2	2	2	2	2	3	2	2
4	3	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	7	IC	2	2	2	3	3	2	3
7	3	3	3	3	3	3	2	3	3	3	3
8	2	2	3	3	3	3	2	2	2	3	2
9	3	2	3	3	3	3	3	3	2	3	3
10	3	2	2	2	2	3	2	2	2	3	2
11	2	3	3	3	3	3	2	2	2	3	3
12	3	3	3	3	3	3	3	3	3	3	3
13	3	2	2	2	3	3	3	2	2	3	2
14	2	2	3	3	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	3	2	2	2	2
17	2	2	2	3	3	2	2	2	2	2	2
18	3	3	3	2	2	2	2	3	2	2	2
19	3	3	3	3	3	3	3	2	2	3	3
20	3	3	3	3	3	3	3	3	3	3	3
21	3	3	2	3	3	3	2	3	3	3	3
22	3	3	3	2	3	2	2	2	2	2	2
23	3	3	2	2	3	3	3	3	2	3	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 27-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	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	IBC	6	IBC	2	2	2	2	2	2	2
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	3	3	2	2	3	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