



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



Date 1/30/22

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.
1/30/2022	0	60	9.8		197		6		50		87		8			13		299		165.5	
1/30/2022	1	60	9.7		198		7		54		87		9			14		299		165.9	
1/30/2022	2	60	9.9		193		15		70		79		8			14		299		164.6	
1/30/2022	3	60	9.8		197		7		53		87		8	9		14		300	299	166.0	165.5
1/30/2022	4	60	9.9		195		15		63		76		8			14		299		164.8	
1/30/2022	5	60	9.9		198		15		48		68		9			14		299		166.3	
1/30/2022	6	60	9.9		199		10		39		74		9			14		299		165.3	
1/30/2022	7	60	9.7		197		23		49		54		10	9		14	14	313	303	167.0	165.8
1/30/2022	8	60	9.8		199		10		51		81		10			14		299		166.0	
1/30/2022	9	60	9.9		197		11		52		78		8			14		299		164.7	
1/30/2022	10	60	9.8		199		13		53		76		8			14		299		165.3	
1/30/2022	11	60	9.9		197		5		37		86		8	8		14		299	299	166.2	165.5
1/30/2022	12	60	9.9		193		8		43		82		6			14		299		166.3	
1/30/2022	13	60	10.0		197		11		54		79		8			14		299		164.3	
1/30/2022	14	60	9.9		199		11		53		80		8			14		299		166.2	
1/30/2022	15	60	9.9		198		13		58		77		6	7		14	14	299	299	167.9	166.2
1/30/2022	16	60	10.0		196		16		67		76		5			13		299		168.8	
1/30/2022	17	60	10.4		197		10		48		78		7			14		299		163.0	
1/30/2022	18	60	10.3		198		15		65		77		8			14		299		165.4	
1/30/2022	19	60	10.3		199		13		64		80		7	7		13		299	299	166.5	165.9
1/30/2022	20	60	10.4		198		17		75		77		8			13		299		165.4	
1/30/2022	21	60	10.3		198		16		75		79		8			14		299		165.8	
1/30/2022	22	60	10.3		196		17		80		79		7			14		299		165.2	
1/30/2022	23	60	10.3		197		14		68		80		8	8		13	14	299	299	164.7	165.3

Average:
Geometric Mean Average:

Limit:

197	12
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

79
≥ 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 1/30/22

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.
1/30/2022	0	60	8.9		177		1		27		97		2			13		310		164.5	
1/30/2022	1	60	8.8		161		1		25		95		4			14		310		165.9	
1/30/2022	2	60	8.9		164		5		44		89		4			14		310		164.5	
1/30/2022	3	60	8.7		181		4		30		88		2	3		14		310	310	166.1	165.3
1/30/2022	4	60	8.7		169		4		30		85		1			14		310		166.5	
1/30/2022	5	60	8.9		186		4		21		81		1			14		310		165.8	
1/30/2022	6	60	9.0		180		4		18		77		1			14		310		163.9	
1/30/2022	7	60	8.7		180		5		19		74		1	1		14	14	310	310	166.5	165.7
1/30/2022	8	60	9.1		186		4		18		75		0			14		310		166.1	
1/30/2022	9	60	8.8		174		5		24		81		1			14		310		165.8	
1/30/2022	10	60	9.0		166		5		25		76		0			14		310		165.6	
1/30/2022	11	60	9.0		165		3		17		82		0	0		14		310	310	166.2	165.9
1/30/2022	12	60	9.1		158		6		29		78		1			14		310		165.3	
1/30/2022	13	60	9.2		180		10		37		74		1			14		310		165.6	
1/30/2022	14	60	9.1		173		15		45		67		1			14		310		165.6	
1/30/2022	15	60	8.8		160		8		31		75		0	1		14	14	310	310	167.6	166.0
1/30/2022	16	60	8.9		167		8		31		74		1			14		309		166.7	
1/30/2022	17	60	9.0		163		4		28		85		1			13		310		159.6	
1/30/2022	18	60	8.8		168		15		53		71		2			13		310		163.0	
1/30/2022	19	60	8.9		169		10		35		72		0	1		13		310	310	166.2	163.9
1/30/2022	20	60	8.8		136		8		40		80		17			14		310		162.0	
1/30/2022	21	60	8.6		155		18		69		73		46			13		310		163.6	
1/30/2022	22	60	8.3		162		13		60		79		3			13		309		161.0	
1/30/2022	23	60	8.6		175		10		44		77		0	17		14	14	311	310	161.3	162.0

Average:
Geometric Mean Average:

Limit:

169	6
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

81
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 30-Jan-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	6	IC	1	1	1	1	1	1	2
7	1	1	1	1	1	1	1	1	1	1	1
8	1	2	2	2	2	2	2	2	2	2	2
9	2	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	2	2	2	2	2	2	2	2	1
14	2	2	1	1	2	1	1	1	1	1	1
15	1	2	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	2	2	2	2	2	2	2	1
20	2	2	1	1	1	1	1	1	1	1	1
21	1	1	1	2	2	2	2	1	1	2	1
22	2	2	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 30-Jan-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	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	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