



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



Date 1/29/22

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.
1/29/2022	0	60	10.5		199		20		76		74		12			14		299		162.7	
1/29/2022	1	60	10.4		199		16		73		79		13			14		299		164.0	
1/29/2022	2	60	10.4		197		21		91		78		15			14		299		163.9	
1/29/2022	3	60	10.3		198		22		100		78		14	13		15		299	299	164.5	163.8
1/29/2022	4	60	10.3		198		23		88		74		13			14		299		163.8	
1/29/2022	5	60	10.1		198		14		62		77		13			14		299		164.3	
1/29/2022	6	60	10.1		200		18		76		77		14			14		299		164.2	
1/29/2022	7	60	10.0		195		19		90		79		14	14		14	14	299	299	163.8	164.0
1/29/2022	8	60	9.8		195		10		66		85		17			15		299		167.8	
1/29/2022	9	60	9.9		198		14		67		78		10			13		299		167.6	
1/29/2022	10	60	10.0		198		13		66		81		10			15		299		166.2	
1/29/2022	11	60	10.0		198		11		69		84		12	12		14		300	299	164.2	166.5
1/29/2022	12	60	9.8		196		15		78		81		12			14		299		165.5	
1/29/2022	13	60	9.7		198		12		66		81		11			13		299		167.6	
1/29/2022	14	60	9.7		197		12		64		81		10			14		299		167.6	
1/29/2022	15	60	9.7		198		9		55		84		10	11		14	14	299	299	167.0	166.9
1/29/2022	16	60	9.8		197		14		57		75		11			14		299		164.1	
1/29/2022	17	60	9.9		193		11		49		78		10			14		299		162.8	
1/29/2022	18	60	9.8		198		9		62		86		9			14		299		165.2	
1/29/2022	19	60	9.8		198		10		63		85		10	10		14		299	299	164.7	164.2
1/29/2022	20	60	9.7		198		5		51		91		9			14		299		165.2	
1/29/2022	21	60	9.8		197		6		49		87		8			14		299		166.1	
1/29/2022	22	60	9.7		198		6		49		88		9			14		299		164.4	
1/29/2022	23	60	9.8		198		5		44		88		9	9		14	14	299	299	164.6	165.1

Average: Geometric Mean Average:	198	12	OR	82	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

- 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 1/29/22

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.
1/29/2022	0	60	8.6		183		14		40		65		2			13		310		166.0	
1/29/2022	1	60	8.7		179		14		36		61		2			13		310		165.5	
1/29/2022	2	60	8.6		184		9		36		75		2			13		310		166.1	
1/29/2022	3	60	8.6		182		11		37		69		2	2		14		310	310	165.8	165.9
1/29/2022	4	60	8.6		171		14		40		66		3			13		310		165.5	
1/29/2022	5	60	8.7		178		12		33		64		2			14		310		165.2	
1/29/2022	6	60	8.9		179		16		36		55		3			14		310		166.1	
1/29/2022	7	60	8.8		172		12		34		64		2	2		14	14	310	310	165.4	165.5
1/29/2022	8	60	8.7		166		9		35		75		2			14		310		166.1	
1/29/2022	9	60	8.7		167		5		26		79		2			14		310		166.1	
1/29/2022	10	60	8.8		164		4		23		83		2			14		310		165.4	
1/29/2022	11	60	8.6		158		5		28		82		2	2		14		310	310	166.2	166.0
1/29/2022	12	60	8.7		150		5		30		85		2			13		309		165.8	
1/29/2022	13	60	8.6		164		4		29		84		2			14		310		166.4	
1/29/2022	14	60	8.7		161		3		27		88		2			14		310		165.7	
1/29/2022	15	60	8.6		165		3		28		89		3	2		13	14	310	310	165.9	165.9
1/29/2022	16	60	8.8		166		7		27		74		3			14		310		165.5	
1/29/2022	17	60	8.8		162		5		26		80		2			14		310		166.0	
1/29/2022	18	60	8.8		157		2		23		90		3			14		310		166.0	
1/29/2022	19	60	8.8		161		2		25		93		2	3		13		310	310	165.3	165.7
1/29/2022	20	60	8.6		159		1		24		96		3			14		310		166.1	
1/29/2022	21	60	8.8		167		2		28		94		2			13		310		166.4	
1/29/2022	22	60	8.8		167		1		25		95		2			14		310		165.5	
1/29/2022	23	60	8.8		178		1		21		96		2	2		14	14	310	310	165.9	166.0

Average:
Geometric Mean Average:

Limit:

168	5
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

84
≥ 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

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 29-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	2	2	1	1
5	2	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	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 29-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