



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



Date 2/21/23

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.
2/21/2023	0	60	11.2		195		7		48		85		1			13		309		166.6	
2/21/2023	1	60	11.1		201		12		52		77		1			13		310		166.0	
2/21/2023	2	60	11.2		198		18		68		73		1			13		309		166.6	
2/21/2023	3	60	11.1		196		20		77		74		1	1		13		309	309	166.7	166.5
2/21/2023	4	60	11.0		206		16		61		73		1			13		309		166.6	
2/21/2023	5	60	11.1		196		16		62		74		1			13		309		166.2	
2/21/2023	6	60	11.0		199		9		49		81		2			13		309		166.7	
2/21/2023	7	60	10.9		197		3		35		91		2	1		13	13	309	309	166.7	166.6
2/21/2023	8	60	11.2		199		3		27		90		2			13		309		164.3	
2/21/2023	9	60	11.0		199		10		58		82		2			13		310		165.8	
2/21/2023	10	60	11.2		199		18		72		75		2			13		309		167.3	
2/21/2023	11	60	11.2		196		14		77		82		2	2		13		309	309	166.8	166.0
2/21/2023	12	60	11.0		200		10		70		86		2			13		310		165.6	
2/21/2023	13	60	11.1		198		0		35		99		2			13		309		164.8	
2/21/2023	14	60	11.1		200		5		52		90		2			13		310		166.9	
2/21/2023	15	60	11.0		198		29		130		78		2	2		13	13	309	309	164.6	165.5
2/21/2023	16	60	11.1		198		8		72		89		2			13		309		165.7	
2/21/2023	17	60	11.0		202		8		72		90		2			13		310		166.3	
2/21/2023	18	60	11.2		195		26		126		79		3			13		310		166.2	
2/21/2023	19	60	11.3		201		15		81		81		3	2		13		309	309	165.5	165.9
2/21/2023	20	60	11.3		198		12		74		83		2			14		309		165.8	
2/21/2023	21	60	11.2		200		17		86		80		2			13		310		166.9	
2/21/2023	22	60	11.3		199		8		59		86		2			13		309		166.8	
2/21/2023	23	60	11.3		196		3		52		93		2	2		13	13	309	309	165.0	166.1

Average: Geometric Mean Average:	199	9	OR	85	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 2/21/23

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.
2/21/2023	0	60	10.6		155		3		20		85		4			14		310		166.3	
2/21/2023	1	60	10.5		155		3		21		85		4			13		310		166.1	
2/21/2023	2	60	10.4		152		15		50		70		3			13		310		166.6	
2/21/2023	3	60	10.4		157		10		41		76		3	3		13		310	310	166.5	166.4
2/21/2023	4	60	10.6		153		15		46		67		4			13		310		166.9	
2/21/2023	5	60	10.6		168		13		45		71		3			13		310		166.3	
2/21/2023	6	60	10.6		165		4		26		84		4			13		310		166.9	
2/21/2023	7	60	10.3		176		7		24		69		4	4		13	13	310	310	167.1	166.8
2/21/2023	8	60	11.0		165		7		23		69		4			14		309		166.4	
2/21/2023	9	60	10.7		169		3		16		80		5			14		310		166.5	
2/21/2023	10	60	10.9		162		9		48		80		4			14		310		166.2	
2/21/2023	11	60	10.9		164		7		37		81		3	4		14		310	310	166.7	166.5
2/21/2023	12	60	10.4		158		2		33		95		5			14		310		166.8	
2/21/2023	13	60	10.5		150		1		30		95		3			14		310		166.9	
2/21/2023	14	60	10.2		161		1		37		97		4			14		310		167.5	
2/21/2023	15	60	10.3		168		2		39		96		4	4		14	14	310	310	166.6	166.9
2/21/2023	16	60	10.2		168		9		63		86		4			14		310		166.7	
2/21/2023	17	60	10.4		180		3		45		94		4			14		310		166.7	
2/21/2023	18	60	10.4		178		7		63		89		3			13		310		166.5	
2/21/2023	19	60	10.4		171		5		54		90		4	4		13		310	310	166.5	166.6
2/21/2023	20	60	10.5		165		8		64		88		3			13		310		166.9	
2/21/2023	21	60	10.6		160		3		44		94		2			13		310		166.5	
2/21/2023	22	60	10.6		164		2		42		95		3			14		310		166.6	
2/21/2023	23	60	10.4		163		7		56		88		3	3		13	13	310	310	166.7	166.7

Average: Geometric Mean Average:	164	5	OR	88	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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 21-Feb-2023

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	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 21-Feb-2023

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	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	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	2	IBC	4	IBC	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0
8	0	1	0	1	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0

Status Flags

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