



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



Date 1/30/23

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.
1/30/2023	0	60	11.0		176		12		53		77		5			13		309		164.6	
1/30/2023	1	60	10.7		186		20		66		69		3			13		309		163.6	
1/30/2023	2	60	10.8		185		12		48		75		3			13		309		163.3	
1/30/2023	3	60	10.6		189		16		52		70		3	4		13		310	309	163.5	163.8
1/30/2023	4	60	10.5		194		15		54		72		4			13		310		165.2	
1/30/2023	5	60	10.5		190		16		54		70		5			13		310		165.6	
1/30/2023	6	60	10.7		191		22		99		78		5			13		310		164.9	
1/30/2023	7	60	10.5		193		15		60		75		5	5		13	13	309	310	165.5	165.3
1/30/2023	8	60	11.0		189		8		45		82		6			13		309		155.5	
1/30/2023	9	60	10.3		189		11		42		75		5			13		310		167.0	
1/30/2023	10	60	10.5		189		3		31		90		7			13		309		168.1	
1/30/2023	11	60	10.6		199		10		40		76		5	6		13		309	309	165.7	164.1
1/30/2023	12	60	10.5		196		21		56		63		5			13		310		167.3	
1/30/2023	13	60	10.6		190		10		38		73		5			13		309		165.8	
1/30/2023	14	60	10.3		189		4		34		89		5			13		310		165.4	
1/30/2023	15	60	10.3		195		14		49		72		6	5		13	13	310	309	166.7	166.3
1/30/2023	16	60	10.3		192		5		40		88		6			13		309		166.1	
1/30/2023	17	60	10.5		192		4		42		90		6			13		310		166.0	
1/30/2023	18	60	10.8		198		30		97		69		4			13		309		165.4	
1/30/2023	19	60	10.6		197		22		85		74		5	5		13		309	309	165.7	165.8
1/30/2023	20	60	10.5		197		10		44		77		5			13		310		166.0	
1/30/2023	21	60	10.5		197		15		43		66		5			13		310		164.3	
1/30/2023	22	60	10.5		198		8		40		80		5			13		310		165.4	
1/30/2023	23	60	10.2		184		8		37		78		33	12		13	13	309	310	167.3	165.8

Average: Geometric Mean Average:	191	11	OR	77	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 1/30/23

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.
1/30/2023	0	60	11.0		196		8		28		72		3			13		310		164.9	
1/30/2023	1	60	11.0		197		11		31		64		2			13		310		165.8	
1/30/2023	2	60	10.9		195		8		23		64		3			13		310		165.2	
1/30/2023	3	60	11.0		197		7		20		64		3	3		14		310	310	164.2	165.0
1/30/2023	4	60	10.8		188		7		26		73		4			14		310		162.3	
1/30/2023	5	60	11.2		186		7		23		69		5			14		310		155.5	
1/30/2023	6	60	11.1		194		7		18		61		5			13		310		164.8	
1/30/2023	7	60	10.9		194		5		8		44		5	5		14	13	310	310	165.5	162.0
1/30/2023	8	60	10.9		197		3		4		22		5			14		310		167.5	
1/30/2023	9	60	10.9		194		3		3		2		5			14		310		165.8	
1/30/2023	10	60	11.0		199		3		4		23		4			14		309		167.2	
1/30/2023	11	60	11.1		194		4		6		36		4	5		14		310	310	165.8	166.6
1/30/2023	12	60	10.9		197		4		8		49		4			13		310		167.4	
1/30/2023	13	60	11.2		197		4		4		5		2			13		310		166.7	
1/30/2023	14	60	10.9		197		3		3		9		4			13		310		165.9	
1/30/2023	15	60	10.8		200		4		7		46		4	4		13	13	310	310	166.3	166.6
1/30/2023	16	60	10.7		196		4		6		42		4			14		310		167.2	
1/30/2023	17	60	11.0		196		3		5		32		5			13		310		165.8	
1/30/2023	18	60	11.0		198		8		15		48		5			13		310		166.6	
1/30/2023	19	60	10.7		197		7		13		48		4	4		13		310	310	166.3	166.5
1/30/2023	20	60	10.8		199		5		10		48		4			13		310		166.8	
1/30/2023	21	60	10.9		196		6		9		33		4			13		310		166.7	
1/30/2023	22	60	10.9		198		4		6		24		4			14		310		166.1	
1/30/2023	23	60	10.8		199		4		5		27		4	4		13	13	310	310	166.3	166.5

Average:
Geometric Mean Average:

Limit:

196	5
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

46
≥ 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-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	2	3	3	2	3	3	3	3	3	3	3
1	2	2	3	3	3	3	3	3	3	3	3
2	3	3	3	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	3	3	2	2
5	2	2	2	2	2	2	2	2	2	2	2
6	2	IC	7	IC	3	3	3	3	3	3	3
7	3		2		2	2	2	2	2	2	2
8	2		2		2	2	2	2	2	2	2
9	2		2		2	2	2	2	2	2	2
10	2		2		2	2	3	3	3	2	2
11	3		3		2	2	3	2	3	2	2
12	2		2		2	2	2	2	2	2	2
13	2		2		2	2	2	2	2	2	2
14	2		2	3	2	3	3	2	2	3	2
15	3		3	3	2	2	2	2	2	2	2
16	2		2	2	2	2	2	2	2	2	2
17	2		2	2	2	2	2	2	2	2	2
18	2		2	2	2	2	2	2	2	2	2
19	3		3	3	3	3	3	3	3	3	3
20	2		2	2	2	2	2	2	2	2	2
21	2		2	2	2	2	2	2	2	2	2
22	2		2	2	2	2	2	2	2	2	2
23	2		2	2	2	2	2	3	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 30-Jan-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	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	IBC	5	IBC	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