



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



Date 5/15/23

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.
5/15/2023	0	60	9.9		131		6		60		90		3			13		309		165.9	
5/15/2023	1	60	10.0		139		15		68		78		2			14		310		165.0	
5/15/2023	2	60	10.0		141		16		72		78		2			14		309		165.9	
5/15/2023	3	60	9.9		139		22		89		75		3	2		15		310	309	165.9	165.7
5/15/2023	4	60	9.9		135		18		76		77		4			15		310		166.0	
5/15/2023	5	60	10.2		140		18		77		77		4			15		309		166.6	
5/15/2023	6	60	10.2		135		14		62		77		4			13		309		163.6	
5/15/2023	7	60	10.3		137		7		49		86		4	4		14	14	309	309	165.8	165.5
5/15/2023	8	60	10.3		138		8		60		86		4			16		309		165.7	
5/15/2023	9	60	10.3		135		5		46		88		4			13		310		167.8	
5/15/2023	10	60	10.5		139		11		54		80		3			12		309		165.9	
5/15/2023	11	60	10.4		141		20		95		79		4	4		12		309	309	167.5	166.7
5/15/2023	12	60	10.1		137		10		56		83		5			9		310		163.8	
5/15/2023	13	60	10.2		140		9		46		79		7			11		309		167.1	
5/15/2023	14	60	10.2		137		6		37		82		6			15		309		164.0	
5/15/2023	15	60	10.1		139		10		45		79		4	5		14	13	309	309	167.1	165.5
5/15/2023	16	60	10.2		137		7		45		84		4			14		309		168.8	
5/15/2023	17	60	10.4		141		10		54		81		4			13		309		166.1	
5/15/2023	18	60	10.4		139		14		58		75		3			14		310		164.3	
5/15/2023	19	60	10.3		141		7		46		84		4	4		12		309	309	166.3	166.4
5/15/2023	20	60	10.4		139		2		39		96		3			15		309		165.8	
5/15/2023	21	60	10.3		139		3		42		94		4			14		310		164.8	
5/15/2023	22	60	10.2		141		10		56		82		4			16		309		167.1	
5/15/2023	23	60	10.2		137		14		61		77		4	4		14	14	309	309	164.6	165.6

Average: Geometric Mean Average:	138	9	OR	83	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 5/15/23

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.
5/15/2023	0	60	10.8		140		12		61		80		1			13		310		167.0	
5/15/2023	1	60	10.9		141		8		58		86		1			13		310		166.9	
5/15/2023	2	60	11.0		138		13		66		80		0			14		310		165.0	
5/15/2023	3	60	11.0		141		7		58		87		0	0		13		310	310	167.3	166.5
5/15/2023	4	60	11.0		143		14		63		78		1			13		310		166.2	
5/15/2023	5	60	11.1		139		12		62		81		1			13		310		167.4	
5/15/2023	6	60	11.0		139		9		56		84		2			13		310		166.3	
5/15/2023	7	60	10.9		139		12		46		73		3	2		13	13	310	310	166.3	166.5
5/15/2023	8	60	11.0		140		3		15		79		2			13		310		166.4	
5/15/2023	9	60	10.9		140		4		22		80		2			13		310		167.8	
5/15/2023	10	60	11.2		139		48		144		67		4			13		310		164.9	
5/15/2023	11	60	11.1		142		27		91		71		3	3		13		310	310	167.7	166.7
5/15/2023	12	60	10.8		139		22		37		41		1			13		310		167.1	
5/15/2023	13	60	10.8		139		13		20		33		1			14		310		166.1	
5/15/2023	14	60	10.7		137		7		12		41		3			13		310		166.5	
5/15/2023	15	60	11.1		134		4		12		62		1	2		13	13	310	310	167.7	166.8
5/15/2023	16	60	10.8		142		3		6		46		2			13		310		166.3	
5/15/2023	17	60	10.8		139		7		11		37		1			13		310		166.3	
5/15/2023	18	60	10.8		140		5		1		0		1			12		310		165.4	
5/15/2023	19	60	10.7		140		5		1		0		1	1		13		310	310	167.1	166.3
5/15/2023	20	60	10.9		139		5		0		0		1			13		310		166.4	
5/15/2023	21	60	10.8		141		10		4		0		1			13		310		166.9	
5/15/2023	22	60	10.8		140		21		14		0		1			12		310		166.7	
5/15/2023	23	60	10.8		139		18		1		0		1	1		13	13	310	310	167.5	166.9

Average:
Geometric Mean Average:

Limit:

140	9
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

38
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 15-May-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	2	1	1	1	1	1	1
2	1	1	1	2	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 15-May-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	3	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