



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



Date 5/11/23

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.
5/11/2023	0	60	9.8		139		11		86		87		3			13		310		166.4	
5/11/2023	1	60	10.2		138		15		95		84		1			12		309		165.7	
5/11/2023	2	60	10.1		141		11		83		87		2			12		310		165.1	
5/11/2023	3	60	10.4		142		18		94		81		1	2		12		310	309	164.7	165.5
5/11/2023	4	60	10.2		143		18		112		84		1			13		310		166.0	
5/11/2023	5	60	10.3		138		13		98		86		2			13		309		165.8	
5/11/2023	6	60	10.4		144		13		102		87		2			14		309		164.6	
5/11/2023	7	60	10.1		133		15		107		86		2	2		14	13	310	309	167.1	165.9
5/11/2023	8	60	10.3		142		22		124		82		2			14		309		168.2	
5/11/2023	9	60	10.5		140		37		172		78		3			15		309		165.6	
5/11/2023	10	60	10.5		140		28		147		81		3			14		309		167.1	
5/11/2023	11	60	10.1		139		15		102		86		4	3		14		310	309	166.2	166.8
5/11/2023	12	60	10.0		130		12		98		88		17			12		309		164.2	
5/11/2023	13	60	10.3		141		4		57		93		5			14		309		165.3	
5/11/2023	14	60	10.1		141		5		60		91		4			13		309		166.4	
5/11/2023	15	60	10.2		140		3		55		95		3	7		14	14	309	309	166.6	165.6
5/11/2023	16	60	10.3		139		6		61		89		3			14		309		165.3	
5/11/2023	17	60	10.2		135		3		55		94		3			14		309		167.1	
5/11/2023	18	60	10.1		137		7		71		90		3			14		309		167.1	
5/11/2023	19	60	10.2		140		12		71		83		2	3		12		310	309	167.3	166.7
5/11/2023	20	60	10.0		139		22		114		81		4			13		310		167.7	
5/11/2023	21	60	10.0		139		15		80		82		3			13		309		166.6	
5/11/2023	22	60	10.1		140		18		89		80		3			12		309		166.7	
5/11/2023	23	60	10.1		140		22		98		78		2	3		13	13	309	309	166.9	167.0

Average: Geometric Mean Average:	139	12	OR	86	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 5/11/23

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.
5/11/2023	0	60	11.4		139		4		50		92		0			13		310		167.1	
5/11/2023	1	60	11.6		139		3		48		94		3			13		310		166.4	
5/11/2023	2	60	11.4		140		7		54		87		0			14		310		166.5	
5/11/2023	3	60	11.7		140		7		54		87		0	1		13		310	310	167.4	166.8
5/11/2023	4	60	11.5		140		18		79		77		1			14		310		166.6	
5/11/2023	5	60	11.6		138		6		50		88		0			13		310		166.0	
5/11/2023	6	60	11.4		141		2		46		96		0			14		310		167.8	
5/11/2023	7	60	11.7		139		14		83		83		1	1		12	13	310	310	164.2	166.1
5/11/2023	8	60	11.5		142		8		62		88		1			14		310		166.9	
5/11/2023	9	60	11.6		140		31		134		77		2			14		310		165.2	
5/11/2023	10	60	11.5		136		18		95		81		1			13		310		167.3	
5/11/2023	11	60	11.4		139		10		67		86		1	1		14		310	310	166.2	166.4
5/11/2023	12	60	11.0		144		9		65		87		1			13		311		165.4	
5/11/2023	13	60	11.9		139		8		55		85		2			13		309		158.3	
5/11/2023	14	60	11.2		137		8		57		86		2			13		310		166.9	
5/11/2023	15	60	11.3		139		5		48		89		1	1		13	13	310	310	166.8	164.3
5/11/2023	16	60	11.5		141		1		36		97		1			11		310		165.3	
5/11/2023	17	60	11.5		138		1		40		97		0			11		310		167.6	
5/11/2023	18	60	11.1		139		2		43		96		1			15		310		167.4	
5/11/2023	19	60	11.1		140		1		44		97		1	1		12		310	310	166.3	166.6
5/11/2023	20	60	11.2		140		3		53		94		1			12		310		165.9	
5/11/2023	21	60	11.3		142		5		52		91		1			13		310		165.8	
5/11/2023	22	60	11.3		138		14		74		82		1			12		310		166.5	
5/11/2023	23	60	11.4		140		15		73		79		2	1		14	12	310	310	166.7	166.2

Average:
Geometric Mean Average:

Limit:

140	6
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

90
≥ 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

Status Flags

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 11-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	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 11-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	0	1	0	1	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	1	0	0	0
2	0	1	0	1	0	1	0	0	0	1	0
3	0	0	0	0	0	0	0	0	0	0	0
4	0	1	1	1	1	0	1	1	0	0	0
5	1	0	0	1	1	1	1	1	1	1	0
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	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	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	0	1	0	1	0
20	0	1	0	0	0	0	0	1	1	0	0
21	0	1	0	0	0	0	1	0	1	0	0
22	1	0	1	0	0	1	0	1	0	1	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