



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



Date 9/26/23

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.
9/26/2023	0	60	10.2		144		12		38		69		0			14		311		158.7	
9/26/2023	1	60	9.9		140		8		35		76		0			14		308		167.0	
9/26/2023	2	60	10.1		140		3		27		89		0			14		299		167.3	
9/26/2023	3	60	9.9		142		10		59		82		0	0		13		295	303	166.2	164.8
9/26/2023	4	60	10.3		139		13		58		78		0			14		297		166.9	
9/26/2023	5	60	10.2		143		3		39		92		0			14		293		164.9	
9/26/2023	6	60	10.3		139		3		27		87		0			14		303		167.2	
9/26/2023	7	60	10.3		142		0		38		99		1	0		14	14	294	297	165.4	166.1
9/26/2023	8	60	10.4		140		7		77		91		1			14		298		166.8	
9/26/2023	9	60	10.4		141		14		53		73		1			14		296		167.1	
9/26/2023	10	57	10.7		134		2		33		93		1			14		295		168.2	
9/26/2023	11	60	10.7		142		0		30		100		0	1		14		287	294	167.7	167.5
9/26/2023	12	60	10.4		142		0		47		100		1			14		294		165.8	
9/26/2023	13	60	10.2		141		5		41		89		1			14		300		167.5	
9/26/2023	14	60	10.2		140		20		51		60		1			9		313		167.2	
9/26/2023	15	60	10.3		142		11		38		72		1	1		14	13	308	304	167.3	167.0
9/26/2023	16	60	10.2		140		17		84		79		1			14		307		167.4	
9/26/2023	17	60	10.5		140		6		101		95		0			14		292		166.6	
9/26/2023	18	60	10.3		140		9		73		88		0			14		284		168.7	
9/26/2023	19	60	10.3		142		6		57		89		0	1		14		287	292	167.6	167.6
9/26/2023	20	60	10.2		139		9		58		84		0			15		292		168.7	
9/26/2023	21	60	10.3		142		4		50		92		0			14		291		166.4	
9/26/2023	22	60	10.4		142		11		60		82		1			14		292		166.0	
9/26/2023	23	60	10.5		140		8		72		90		1	0		14	14	288	290	167.4	167.1

Average:
Geometric Mean Average:

Limit:

141	4
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

92
≥ 80% 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

- 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 9/26/23

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.
9/26/2023	0	60	10.0		141		7		36		80		5			14		310		167.0	
9/26/2023	1	60	10.1		138		7		33		78		5			13		311		168.3	
9/26/2023	2	60	10.1		141		14		36		62		5			13		311		167.6	
9/26/2023	3	60	10.3		139		19		38		50		5	5		15		319	313	166.9	167.5
9/26/2023	4	60	10.1		143		23		49		54		6			15		323		166.6	
9/26/2023	5	60	10.4		139		18		44		59		5			15		322		167.2	
9/26/2023	6	60	10.4		140		12		39		69		4			15		312		167.8	
9/26/2023	7	60	10.6		139		4		43		91		5	5		15	14	305	316	166.8	167.1
9/26/2023	8	60	10.5		141		4		49		92		6			15		306		166.6	
9/26/2023	9	60	10.6		139		16		62		74		5			14		312		167.7	
9/26/2023	10	60	10.6		139		5		46		88		4			14		314		167.4	
9/26/2023	11	60	10.5		140		2		40		94		5	5		14		316	312	168.1	167.4
9/26/2023	12	60	10.4		139		6		45		87		5			14		315		168.1	
9/26/2023	13	60	10.2		140		8		44		81		5			15		319		167.5	
9/26/2023	14	60	10.2		140		10		34		70		5			15		328		167.6	
9/26/2023	15	60	10.3		140		7		41		83		5	5		14	14	329	323	167.7	167.7
9/26/2023	16	60	10.3		139		24		85		71		5			15		331		167.8	
9/26/2023	17	60	10.4		139		26		108		76		5			14		332		166.1	
9/26/2023	18	60	10.4		139		9		50		81		4			14		325		168.0	
9/26/2023	19	60	10.4		141		15		63		76		5	5		14		318	327	166.4	167.0
9/26/2023	20	60	10.4		140		16		55		70		5			15		320		167.7	
9/26/2023	21	60	10.4		139		23		68		67		5			14		321		166.6	
9/26/2023	22	60	10.5		140		19		62		69		6			13		325		167.9	
9/26/2023	23	60	10.6		138		25		78		68		5	5		14	14	325	322	167.7	167.5

Average:
Geometric Mean Average:

Limit:

140	11
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

78
≥ 80% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 26-Sep-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	3	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	I	1	I	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	0	1	0	1	0
18	1	1	1	1	1	1	1	1	0	1	0
19	0	1	0	0	1	1	1	1	1	1	0
20	0	1	0	1	1	1	1	1	1	1	0
21	1	1	1	1	1	0	1	1	1	0	0
22	1	1	1	1	1	1	1	1	1	1	1
23	0	1	1	1	1	0	1	1	1	0	0

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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 26-Sep-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	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0
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	5	IBC	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	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