



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



Date 9/22/23

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.
9/22/2023	0	60	10.0		137		12		51		76		0			16		308		165.2	
9/22/2023	1	60	10.2		141		11		50		78		0			16		310		163.6	
9/22/2023	2	60	10.1		144		13		45		72		0			16		310		167.0	
9/22/2023	3	60	10.2		141		10		36		73		0	0		16		309	309	165.9	165.4
9/22/2023	4	60	10.2		143		6		30		79		0			15		310		168.0	
9/22/2023	5	60	10.3		141		10		37		73		0			16		309		168.5	
9/22/2023	6	60	10.9		134		17		62		72		0			16		308		167.7	
9/22/2023	7	60	10.6		139		19		71		73		0	0		12	16	310	309	168.2	168.1
9/22/2023	8	60	10.6		145		21		102		80		1			12		310		165.9	
9/22/2023	9	60	10.4		141		16		81		80		1			13		309		168.2	
9/22/2023	10	60	10.4		140		8		53		85		0			13		309		166.7	
9/22/2023	11	60	10.3		143		6		42		87		1	1		14		310	310	165.1	166.5
9/22/2023	12	60	10.2		138		6		43		86		1			14		310		167.3	
9/22/2023	13	60	10.9		128		5		43		89		0			13		308		168.5	
9/22/2023	14	60	10.7		146		2		37		94		1			15		311		159.4	
9/22/2023	15	60	10.5		139		15		70		79		1	1		13	13	310	310	167.7	165.7
9/22/2023	16	60	10.3		144		7		43		83		1			11		310		165.5	
9/22/2023	17	60	10.5		138		10		48		80		0			9		309		168.1	
9/22/2023	18	60	10.6		139		8		54		85		1			15		309		166.6	
9/22/2023	19	60	10.6		144		18		89		79		1	1		19		309	309	167.5	166.9
9/22/2023	20	60	10.4		141		20		104		80		1			28		310		167.8	
9/22/2023	21	60	10.5		141		19		92		80		1			19		310		167.5	
9/22/2023	22	60	10.8		140		17		101		83		1			17		309		159.1	
9/22/2023	23	60	10.4		142		15		80		82		0	1		17	17	310	310	167.3	165.4

Average:
Geometric Mean Average:

Limit:

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

OR

81
≥ 80% 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

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 9/22/23

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.
9/22/2023	0	60	10.0		139		7		53		88		5			15		310		166.4	
9/22/2023	1	60	10.1		140		2		38		96		6			15		310		167.2	
9/22/2023	2	60	10.0		140		0		30		100		5			15		310		167.7	
9/22/2023	3	60	10.0		139		0		28		100		5	5		16		310	310	167.3	167.1
9/22/2023	4	60	10.0		143		0		23		100		4			16		310		167.2	
9/22/2023	5	60	10.2		138		2		35		96		4			13		310		167.0	
9/22/2023	6	60	10.4		140		2		31		95		3			15		310		167.3	
9/22/2023	7	60	10.9		137		7		51		86		5	4		14	15	310	310	158.8	165.1
9/22/2023	8	60	10.4		144		0		40		100		6			11		310		166.6	
9/22/2023	9	60	10.2		138		0		35		100		4			15		310		167.8	
9/22/2023	10	60	10.1		140		0		41		100		5			15		310		167.8	
9/22/2023	11	60	10.2		140		0		49		100		5	5		16		310	310	167.7	167.5
9/22/2023	12	60	10.2		139		0		43		99		4			16		310		167.2	
9/22/2023	13	60	10.2		140		0		31		100		4			17		310		166.7	
9/22/2023	14	60	10.2		140		3		55		94		5			17		310		168.2	
9/22/2023	15	60	10.2		140		1		39		97		4	4		17	15	310	310	167.9	167.5
9/22/2023	16	60	9.7		137		0		41		100		5			17		310		164.9	
9/22/2023	17	60	9.9		141		0		38		100		4			17		310		162.9	
9/22/2023	18	60	9.8		139		0		41		100		4			19		310		167.5	
9/22/2023	19	60	9.9		140		0		44		100		3	4		16		310	310	166.4	165.4
9/22/2023	20	60	10.0		140		1		62		99		3			14		310		167.9	
9/22/2023	21	60	10.0		140		2		58		97		3			16		310		167.1	
9/22/2023	22	60	9.9		139		0		62		99		3			16		310		167.4	
9/22/2023	23	60	10.2		139		3		69		95		3	3		13	16	310	310	167.4	167.5

Average: Geometric Mean Average:	140	0	OR	100	see above	see above	see above	see above
Limit:	≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 80% 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 22-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	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 22-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	1	0	0	0	1	0	0	1	1	1	0	
8	1	1	1	1	0	1	1	0	0	1	1	0
9	1	1	1	1	1	1	1	1	1	1	1	1
10	1	1	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	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