



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



Date 9/1/23

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.
9/1/2023	0	60	10.3		143		20		67		71		0			14		309		167.3	
9/1/2023	1	60	10.4		149		20		86		76		0			14		310		168.2	
9/1/2023	2	60	10.4		138		17		73		77		0			15		309		169.9	
9/1/2023	3	60	10.5		142		19		69		73		0	0		14		310	309	167.4	168.2
9/1/2023	4	60	10.6		146		13		64		80		0			17		309		165.7	
9/1/2023	5	60	10.4		140		11		46		75		0			15		310		167.2	
9/1/2023	6	60	10.5		140		4		32		88		0			15		309		164.5	
9/1/2023	7	60	10.4		142		1		32		97		0	0		14	15	309	309	164.8	165.5
9/1/2023	8	60	10.4		142		23		113		80		0			13		309		167.4	
9/1/2023	9	60	10.4		140		22		89		75		1			13		310		166.5	
9/1/2023	10	60	10.6		142		18		65		72		0			14		309		168.3	
9/1/2023	11	60	10.7		146		16		73		78		0	0		19		310	309	167.3	167.4
9/1/2023	12	60	10.4		139		7		44		85		1			15		309		166.2	
9/1/2023	13	60	10.5		139		3		46		94		0			12		309		166.8	
9/1/2023	14	60	10.6		142		0		42		100		0			15		309		168.2	
9/1/2023	15	60	10.7		139		3		55		94		0	0		16	15	309	309	165.9	166.8
9/1/2023	16	60	10.7		140		14		88		85		3			10		309		168.0	
9/1/2023	17	60	10.8		143		20		95		79		0			15		309		166.8	
9/1/2023	18	60	11.1		140		15		65		76		0			13		310		164.3	
9/1/2023	19	60	10.9		141		11		66		84		1	1		11		310	309	168.5	166.9
9/1/2023	20	60	10.7		138		8		54		85		0			15		309		169.0	
9/1/2023	21	60	10.7		143		15		59		74		0			15		310		167.9	
9/1/2023	22	60	10.8		144		10		47		78		0			15		310		164.4	
9/1/2023	23	60	10.7		137		9		53		83		4	1		15	14	309	309	167.7	167.2

Average: Geometric Mean Average:	141	8	OR	86	see above	see above	see above	see above			
Limit:	≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 80% Removal Efficiency	≤ 69 4-HR Block Average	ppmc	≥ 12 8-HR. Block Average	lb/hr	≤ 345 °F 4-HR Block Average	≤ 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 9/1/23

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.
9/1/2023	0	60	10.3		140		6		57		90		5			14		310		167.6	
9/1/2023	1	60	10.5		139		15		81		81		4			12		310		168.2	
9/1/2023	2	60	10.7		139		6		60		90		4			11		310		167.1	
9/1/2023	3	60	10.6		141		12		71		83		4	4		5		310	310	168.3	167.8
9/1/2023	4	60	10.7		139		6		61		89		4			20		310		167.5	
9/1/2023	5	60	10.6		141		1		42		99		3			24		310		167.4	
9/1/2023	6	60	10.5		140		0		31		100		4			18		310		166.9	
9/1/2023	7	60	10.4		138		0		37		100		4	4		22	16	310	310	167.9	167.4
9/1/2023	8	60	10.5		141		1		50		98		4			12		310		166.7	
9/1/2023	9	60	10.6		137		6		73		92		6			20		310		159.6	
9/1/2023	10	60	10.1		140		12		90		87		5			20		310		168.5	
9/1/2023	11	60	10.3		140		4		76		95		3	5		15		310	310	167.3	165.5
9/1/2023	12	60	10.2		141		4		54		93		6			14		310		166.7	
9/1/2023	13	60	10.2		139		0		43		100		5			14		310		166.9	
9/1/2023	14	60	10.2		138		0		59		100		4			14		310		168.4	
9/1/2023	15	60	10.2		139		0		59		100		4	5		15	15	310	310	166.9	167.3
9/1/2023	16	60	10.2		140		0		62		99		3			13		310		167.0	
9/1/2023	17	60	10.3		139		1		61		99		2			15		310		167.6	
9/1/2023	18	60	10.4		140		0		53		100		2			16		310		168.2	
9/1/2023	19	60	10.4		138		4		69		94		2	2		14		310	310	171.2	168.5
9/1/2023	20	60	10.3		141		0		50		99		2			15		310		169.2	
9/1/2023	21	60	10.4		140		1		51		99		3			14		310		166.0	
9/1/2023	22	60	10.4		139		1		48		99		2			16		310		169.4	
9/1/2023	23	60	10.3		140		0		41		100		2	2		15	15	310	310	168.2	168.2

Average:
Geometric Mean Average:

Limit:

140	1
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

99
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 01-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 01-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	4	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