



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



Date 1/2/24

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.
1/2/2024	0	60	10.3		140		16		46		65		0			13		310		168.5	
1/2/2024	1	60	10.3		140		18		48		62		0			13		310		168.1	
1/2/2024	2	60	10.3		140		21		48		57		0			13		309		167.2	
1/2/2024	3	60	10.4		148		19		43		55		0	0		13		309	309	165.7	167.4
1/2/2024	4	60	10.3		149		22		36		41		0			13		310		167.4	
1/2/2024	5	60	10.5		136		17		51		67		0			15		308		161.5	
1/2/2024	6	60	10.3		142		22		52		58		0			13		310		165.7	
1/2/2024	7	60	10.4		140		16		35		54		0	0		13	13	310	310	166.9	165.4
1/2/2024	8	60	10.4		143		8		31		73		0			13		309		166.0	
1/2/2024	9	60	10.5		138		18		74		76		0			13		309		168.6	
1/2/2024	10	60	10.6		143		12		56		79		0			13		310		167.3	
1/2/2024	11	60	10.5		139		4		37		88		0	0		13		309	309	166.0	167.0
1/2/2024	12	60	10.5		140		6		34		81		2			14		309		163.8	
1/2/2024	13	60	10.3		141		2		29		95		0			14		310		166.9	
1/2/2024	14	60	10.4		141		2		27		93		0			14		309		165.0	
1/2/2024	15	60	10.4		141		9		34		72		0	1		14	13	310	309	167.1	165.7
1/2/2024	16	60	10.2		141		13		42		68		0			14		310		166.5	
1/2/2024	17	60	10.4		143		14		45		68		0			14		309		166.7	
1/2/2024	18	60	10.5		139		28		99		72		0			14		310		166.3	
1/2/2024	19	60	10.4		141		21		65		67		0	0		14		310	309	166.3	166.4
1/2/2024	20	60	10.4		141		18		54		66		0			14		309		166.0	
1/2/2024	21	60	10.4		141		21		50		58		0			14		309		165.3	
1/2/2024	22	60	10.4		140		22		49		56		0			13		310		167.6	
1/2/2024	23	60	10.5		140		10		28		65		0	0		14	14	309	309	166.2	166.3

Average:
Geometric Mean Average:

Limit:

141	12
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

72
≥ 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 1/2/24

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.
1/2/2024	0	60	9.8		139		2		18		87		4			12		310		166.5	
1/2/2024	1	60	9.7		140		6		25		78		4			15		310		167.6	
1/2/2024	2	60	9.6		141		2		20		90		4			15		310		167.8	
1/2/2024	3	60	9.6		137		0		15		98		4	4		15		310	310	167.4	167.4
1/2/2024	4	60	9.5		144		2		17		88		5			6		310		167.4	
1/2/2024	5	60	9.9		137		2		20		92		4			24		309		163.0	
1/2/2024	6	60	9.7		139		4		18		80		52			22		310		165.5	
1/2/2024	7	60	9.8		139		2		23		90		5	17		15	16	310	310	165.4	165.3
1/2/2024	8	60	9.7		140		1		16		93		5			13		310		167.9	
1/2/2024	9	60	9.8		140		0		28		98		7			13		310		166.5	
1/2/2024	10	60	9.7		140		0		16		99		7			13		310		168.0	
1/2/2024	11	60	9.5		140		0		17		100		7	7		13		310	310	167.5	167.5
1/2/2024	12	60	9.6		139		0		15		100		6			15		310		166.8	
1/2/2024	13	60	9.5		135		0		17		100		6			16		310		167.0	
1/2/2024	14	60	9.9		142		0		18		100		5			15		309		168.6	
1/2/2024	15	60	9.5		140		0		26		99		5	6		14	14	310	310	167.6	167.5
1/2/2024	16	60	9.6		139		0		24		99		6			14		310		166.2	
1/2/2024	17	60	9.6		141		0		28		99		6			14		310		167.5	
1/2/2024	18	60	9.6		138		4		45		91		6			14		310		167.6	
1/2/2024	19	60	9.6		141		0		28		99		6	6		14		310	310	167.7	167.3
1/2/2024	20	60	9.5		138		1		23		97		6			14		310		167.4	
1/2/2024	21	60	9.6		140		0		23		98		6			14		310		168.2	
1/2/2024	22	60	9.7		140		1		25		94		5			14		310		167.1	
1/2/2024	23	60	9.8		139		1		19		95		6	6		14	14	310	310	167.2	167.5

Average:
Geometric Mean Average:

Limit:

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

OR

98
≥ 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 OPACITY REPORT



Date 02-Jan-2024

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	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	0	IC	4	IC	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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 02-Jan-2024

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	2	2	2	1	1	1	1	1	1	1	1
1	1	1	1	2	2	2	2	2	2	2	1
2	2	2	2	1	1	1	1	1	1	1	1
3	1	1	1	2	2	2	2	2	2	2	1
4	2	2	2	2	2	2	2	2	2	2	2
5	2	2	2	2	2	2	2	2	2	2	2
6	0	IBC	6	IBC	2	2	2	2	2	2	2
7	2	2	2	2	2	2	2	2	2	2	2
8	2	2	2	2	2	2	2	2	2	2	2
9	2	2	2	2	2	2	2	2	2	2	2
10	2	2	2	2	2	2	2	2	2	2	2
11	2	2	2	2	2	2	2	2	2	2	2
12	2	2	2	2	2	2	2	2	2	2	2
13	2	2	2	2	2	2	2	2	2	2	2
14	2	2	2	2	2	2	2	2	2	2	2
15	2	2	2	2	2	2	2	2	2	2	2
16	2	2	2	2	2	2	2	2	2	2	2
17	2	2	2	2	2	2	1	2	1	2	1
18	2	2	2	2	2	2	2	2	1	2	1
19	2	2	2	2	2	2	2	2	2	2	2
20	2	2	2	2	2	2	2	2	2	2	2
21	2	2	2	2	2	2	2	2	2	2	2
22	2	2	2	2	2	1	2	2	2	1	1
23	2	2	2	2	2	2	2	2	2	2	2

Status Flags

I - Invalid C - Calibration F - Offline T - Out of Control ^ - Startup
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown