



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



Date 11/8/23

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.
11/8/2023	0	60	10.4		140		17		23		27		1			13		309		166.3	
11/8/2023	1	60	10.2		142		18		28		35		9			13		309		169.3	
11/8/2023	2	60	10.4		141		20		21		7		0			13		309		168.8	
11/8/2023	3	60	10.5		140		19		28		32		0	3		13		309	309	166.6	167.8
11/8/2023	4	60	10.4		143		18		27		33		0			13		310		166.8	
11/8/2023	5	60	10.4		141		16		25		34		0			13		309		165.1	
11/8/2023	6	60	10.7		139		19		20		7		1			13		309		163.9	
11/8/2023	7	60	10.5		139		20		27		26		1	1		13	13	309	309	163.3	164.8
11/8/2023	8	60	10.3		143		15		27		46		0			12		310		167.4	
11/8/2023	9	60	10.6		139		22		29		25		0			12		309		169.0	
11/8/2023	10	60	10.6		143		17		36		54		0			13		309		167.2	
11/8/2023	11	60	10.4		142		15		23		34		1	0		13		309	310	167.3	167.7
11/8/2023	12	60	10.3		140		14		20		28		0			14		310		167.1	
11/8/2023	13	60	10.5		139		13		22		43		1			18		308		159.0	
11/8/2023	14	60	10.6		142		16		17		7		0			17		310		165.8	
11/8/2023	15	60	10.6		141		14		14		0		0	0		17	15	309	309	163.5	163.8
11/8/2023	16	60	10.2		143		10		11		12		0			17		311		164.6	
11/8/2023	17	60	10.3		140		15		17		9		0			15		309		165.0	
11/8/2023	18	60	10.3		143		25		58		56		0			15		310		167.1	
11/8/2023	19	60	10.4		138		22		39		45		0	0		14		309	310	166.1	165.7
11/8/2023	20	60	10.2		143		18		34		47		0			14		310		167.4	
11/8/2023	21	60	10.2		140		19		25		24		0			14		309		165.5	
11/8/2023	22	60	10.3		141		24		50		51		0			14		310		165.9	
11/8/2023	23	60	10.3		141		23		53		56		0	0		14	15	309	309	166.2	166.2

Average:
Geometric Mean Average:

Limit:

141	18	OR	33
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 80% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

see above	see above	see above
≥ 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 11/8/23

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.
11/8/2023	0	60	10.5		140		0		46		99		5			15		310		167.4	
11/8/2023	1	60	10.5		139		5		56		90		5			15		310		167.5	
11/8/2023	2	60	10.5		140		3		51		93		5			15		310		167.9	
11/8/2023	3	60	10.5		141		3		53		94		5	5		16		310	310	167.5	167.6
11/8/2023	4	60	10.6		140		3		51		93		6			17		310		167.8	
11/8/2023	5	60	10.7		141		7		56		87		6			14		310		167.6	
11/8/2023	6	60	10.9		140		11		51		79		5			11		310		167.1	
11/8/2023	7	60	10.8		140		13		61		79		6	6		15	15	310	310	167.8	167.6
11/8/2023	8	60	10.9		139		17		73		76		7			14		310		164.5	
11/8/2023	9	60	10.9		137		15		66		78		8			13		310		165.9	
11/8/2023	10	60	10.7		143		14		67		79		6			11		310		168.4	
11/8/2023	11	60	10.3		141		1		36		96		6	7		15		310	310	166.8	166.4
11/8/2023	12	60	10.3		135		0		30		99		5			12		310		167.1	
11/8/2023	13	60	9.9		138		12		59		79		55			9		309		169.7	
11/8/2023	14	60	11.0		128		1		23		97		3			20		311		167.5	
11/8/2023	15	60	11.2		139		0		24		100		6	17		20	14	310	310	166.3	167.7
11/8/2023	16	60	10.8		138		0		32		99		15			16		310		169.0	
11/8/2023	17	60	10.6		141		0		41		99		7			14		310		166.4	
11/8/2023	18	60	10.6		140		8		61		87		6			13		310		167.4	
11/8/2023	19	60	10.6		140		7		48		85		5	8		13		310	310	167.3	167.5
11/8/2023	20	60	10.7		139		18		75		77		5			14		310		167.7	
11/8/2023	21	60	10.6		141		5		41		89		5			13		310		167.4	
11/8/2023	22	60	10.6		140		13		46		71		5			14		310		167.4	
11/8/2023	23	60	10.8		137		70		143		51		6	5		13	14	310	310	167.2	167.4

Average: Geometric Mean Average:	139	4	OR	93	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

- | | | | | |
|-------------|-----------------|-------------|--------------------|--------------|
| 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 08-Nov-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	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	3	IC	5	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	1	0	0	0	1	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	1	1	1	1	1	1	1	1	1	0
19	1	1	0	1	1	1	1	1	1	1	0
20	1	1	1	1	1	1	1	1	1	1	1
21	1	1	1	0	0	0	1	1	1	0	0
22	1	1	1	1	1	0	0	0	1	0	0
23	1	1	1	1	1	1	1	1	0	1	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 08-Nov-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