



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



Date 3/18/24

Plant Wheelabrator North Andover

NOTE: Emission & Process results may change after Startup, Shutdown, Malfunction data validation

Unit Unit 1  
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.
3/18/2024	0	60	9.9		141		18		44		60		1			15		309		167.4	
3/18/2024	1	60	10.1		139		25		70		64		1			14		309		167.2	
3/18/2024	2	60	10.2		141		21		49		57		0			14		309		166.6	
3/18/2024	3	60	10.0		142		21		47		56		0	1		14		310	309	167.5	167.2
3/18/2024	4	60	10.1		141		20		39		48		0			13		309		165.5	
3/18/2024	5	60	10.1		140		21		38		43		0			13		309		168.4	
3/18/2024	6	60	10.1		142		17		37		54		0			13		310		165.3	
3/18/2024	7	60	10.1		142		17		27		38		0	0		13	13	309	309	168.2	166.9
3/18/2024	8	60	10.3		139		19		35		46		2			14		309		166.2	
3/18/2024	9	60	10.2		142		19		27		31		1			13		309		165.7	
3/18/2024	10	60	10.1		139		16		21		24		1			14		309		167.4	
3/18/2024	11	60	10.0		142		20		19		0		0	1		14		310	309	165.5	166.2
3/18/2024	12	60	10.0		141		17		14		0		2			13		309		166.5	
3/18/2024	13	60	9.8		139		15		15		0		1			14		310		166.3	
3/18/2024	14	60	10.7		141		17		14		0		1			13		309		165.5	
3/18/2024	15	60	10.7		139		25		23		0		1	1		13	13	310	309	152.2	162.6
3/18/2024	16	60	10.1		145		22		28		22		0			12		312		166.9	
3/18/2024	17	60	10.4		139		30		60		49		1			13		309		167.4	
3/18/2024	18	60	10.3		143		28		64		57		0			13		310		167.3	
3/18/2024	19	60	10.4		141		45		57		22		1	0		13		313	311	166.5	167.0
3/18/2024	20	60	10.2		140		21		51		59		1			13		309		167.6	
3/18/2024	21	60	10.2		143		21		32		33		0			13		310		168.2	
3/18/2024	22	60	10.3		139		18		20		12		1			13		309		167.8	
3/18/2024	23	60	10.2		141		17		22		21		1	1		13	13	309	309	168.3	168.0

Average:  
Geometric Mean Average:

Limit:

141	21	OR	35
≤ 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 DRAFT - COMPLIANCE SUMMARY REPORT



Date 3/18/24

Plant Wheelabrator North Andover

NOTE: Emission & Process results may change after Startup, Shutdown, Malfunction data validation

Unit Unit 2

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.
3/18/2024	0	60	10.2		138		0		39		100		5			13		309		167.1	
3/18/2024	1	60	10.1		140		0		41		100		5			13		310		167.0	
3/18/2024	2	60	10.2		140		2		52		95		4			12		310		167.8	
3/18/2024	3	60	10.2		138		0		45		100		5	5		12		309	310	166.8	167.2
3/18/2024	4	60	10.1		144		0		47		100		4			14		310		167.1	
3/18/2024	5	60	10.0		138		3		42		92		4			14		310		167.9	
3/18/2024	6	60	10.0		140		0		18		99		5			15		310		167.6	
3/18/2024	7	60	10.0		140		8		43		81		5	4		15	13	310	310	167.1	167.4
3/18/2024	8	60	10.1		139		5		46		89		7			14		310		166.7	
3/18/2024	9	60	10.2		138		1		31		97		6			15		310		165.0	
3/18/2024	10	60	10.2		140		0		35		99		6			13		310		166.7	
3/18/2024	11	60	10.6		143		0		23		100		3	5		14		309	310	169.0	166.8
3/18/2024	12	60	10.2		139		0		26		100		4			14		311		165.3	
3/18/2024	13	60	10.1		137		0		33		100		5			13		310		167.0	
3/18/2024	14	60	10.1		144		9		46		80		6			14		310		167.4	
3/18/2024	15	60	10.1		139		15		57		73		7	5		13	14	310	310	167.7	166.8
3/18/2024	16	60	10.0		138		13		76		83		6			14		310		166.9	
3/18/2024	17	60	10.0		141		24		107		78		6			13		310		167.5	
3/18/2024	18	60	10.2		139		20		95		78		6			13		310		167.9	
3/18/2024	19	60	10.1		139		21		106		80		6	6		13		310	310	167.7	167.5
3/18/2024	20	60	10.1		138		15		72		79		5			13		310		168.3	
3/18/2024	21	60	10.2		142		5		49		89		5			13		310		167.1	
3/18/2024	22	60	10.2		140		8		52		85		6			14		310		167.9	
3/18/2024	23	60	10.4		138		1		35		98		5	5		13	13	310	310	167.3	167.7

Average:  
Geometric Mean Average:

Limit:

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

OR

97
≥ 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 OPACITY REPORT



Date 18-Mar-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	1	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 18-Mar-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	1	1	1	1	1	1	1	1	1	1
1	1	1	2	2	1	1	1	1	1	1	1
2	1	1	1	1	2	2	2	2	1	2	1
3	1	1	1	1	1	2	1	1	2	2	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	1	IC	6	IC	1	1	2	1	1	2	2
7	1	1	1	1	1	2	2	2	2	2	1
8	2	2	2	1	2	1	1	1	1	1	1
9	2	1	1	1	1	1	1	1	2	1	1
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	1	1	1	1	1	1	1	1
13	2	2	2	2	2	2	2	1	2	2	2
14	2	2	1	2	2	2	2	1	1	2	1
15	1	2	1	2	1	1	1	2	2	1	1
16	1	1	1	1	2	1	2	1	2	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	2	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