



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



Date 4/15/24

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.	4 Hr Block
4/15/2024	0	60	10.0		139		4		56		93		6			13		309		166.2		
4/15/2024	1	60	10.2		143		15		74		80		5			13		309		167.4		
4/15/2024	2	60	10.2		141		7		61		88		5			14		309		165.3		
4/15/2024	3	60	10.2		139		1		51		98		5	5		13		309	309	165.2	166.0	
4/15/2024	4	60	10.0		143		8		65		88		6			14		310		165.8		
4/15/2024	5	60	10.0		143		5		62		92		4			13		309		167.4		
4/15/2024	6	60	10.0		138		1		52		98		11			14		309		160.5		
4/15/2024	7	60	10.1		139		2		57		97		15	9		13	13	310	309	165.0	164.7	
4/15/2024	8	60	10.2		146		1		48		98		9			14		310		162.3		
4/15/2024	9	60	10.1		140		4		58		93		10			13		310		165.3		
4/15/2024	10	60	10.3		142		27		101		73		7			13		309		167.8		
4/15/2024	11	60	14.2		141		4		61		94		220	61		13		254	296	88.5	146.0	
4/15/2024	12	13	17.6	IF	302	IF	0	IF	50	IBF	100	IBF	747	IF		13		245		44.9		
4/15/2024	13	0	19.6	IF	302	IF	58	IF	102	IBF	43	IBF	6246	IF		13		238		15.1		
4/15/2024	14	0	19.7	IF	330	IF	48	IF	116	IBF	59	IBF	5867	IF		12		231		10.7		
4/15/2024	15	0	20.5	IF	14	IF	5	IF	307	IBF	98	IBF	408	IF	3317	IF	14	13	224	235	3.0	18.4
4/15/2024	16	0	20.9	IF	7	IF	2	IF	992	IBF	100	IBF	155	IF		14		207		0.0		
4/15/2024	17	0	21.0	IF	1	IF	4	IF	3346	IBF	100	IBF	57	IF		5		180		0.0		
4/15/2024	18	0	21.0	IF	0	IF	5	IF	7574	IBF	100	IBF	29	IF		0		156		0.0		
4/15/2024	19	0	21.0	IF	0	IF	5	IF	8557	IBF	100	IBF	15	IF	64	IF	0	139	170	0.0	0.0	
4/15/2024	20	0	21.0	IF	0	IF	6	IF	10179	IBF	100	IBF	16	IF		0		127		0.0		
4/15/2024	21	0	21.1	IF	0	IF	6	IF	7000	IBF	100	IBF	13	IF		0		117		0.0		
4/15/2024	22	0	21.1	IF	0	IF	6	IF	5337	IBF	100	IBF	10	IF		0		114		0.0		
4/15/2024	23	0	21.1	IF	0	IF	6	IF	4836	IBF	100	IBF	1	IF	10	IF	0	2	109	117	0.0	0.0

Average:
Geometric Mean Average:

Limit:

141	4
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

93
≥ 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 DRAFT - COMPLIANCE SUMMARY REPORT



Date 4/15/24

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.
4/15/2024	0	60	10.1		137		0		32		100		5			13		310		168.1	
4/15/2024	1	60	10.3		140		0		34		99		5			13		310		167.7	
4/15/2024	2	60	10.1		141		0		24		100		6			13		310		165.3	
4/15/2024	3	60	10.0		139		0		28		100		6	5		13		310	310	167.3	167.1
4/15/2024	4	60	10.0		140		0		25		100		6			13		310		166.4	
4/15/2024	5	60	10.1		139		0		27		100		6			13		310		167.3	
4/15/2024	6	60	10.0		142		0		23		100		7			13		310		167.5	
4/15/2024	7	60	10.4		137		0		21		100		7	6		13	13	310	310	166.5	166.9
4/15/2024	8	60	10.2		142		0		18		100		8			13		310		167.2	
4/15/2024	9	60	10.2		138		0		21		100		9			14		310		167.0	
4/15/2024	10	60	9.9		141		0		22		100		8			13		310		168.4	
4/15/2024	11	60	9.9		142		0		20		100		7	8		13		310	310	168.3	167.7
4/15/2024	12	60	10.0		136		1		33		98		5			13		310		167.9	
4/15/2024	13	60	10.0		139		0		13		100		8			13		310		165.5	
4/15/2024	14	60	10.3		139		2		28		94		6			13		309		168.2	
4/15/2024	15	60	10.2		141		0		15		100		7	7		14	13	310	310	166.7	167.1
4/15/2024	16	60	10.3		140		0		21		100		8			13		310		165.9	
4/15/2024	17	60	10.3		141		0		21		99		8			13		310		166.2	
4/15/2024	18	60	10.1		139		0		26		100		7			13		310		168.7	
4/15/2024	19	60	10.2		139		0		21		100		7	7		13		309	310	167.0	166.9
4/15/2024	20	60	10.2		141		0		22		100		7			14		310		165.8	
4/15/2024	21	60	10.4		139		1		23		96		7			14		310		166.8	
4/15/2024	22	60	10.4		140		1		22		98		8			14		310		166.4	
4/15/2024	23	60	10.3		139		0		20		98		7	7		13	13	310	310	165.6	166.1

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

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