



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



Date 5/16/23

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.
5/16/2023	0	60	10.2		135		11		59		81		4			14		309		165.4	
5/16/2023	1	60	10.1		142		12		51		76		3			14		310		166.7	
5/16/2023	2	60	10.3		139		13		53		75		3			15		309		165.9	
5/16/2023	3	60	10.2		141		13		51		76		3	3		14		309	309	165.8	166.0
5/16/2023	4	60	10.3		141		6		44		86		3			14		309		165.0	
5/16/2023	5	60	10.2		141		1		38		96		4			14		309		165.9	
5/16/2023	6	60	10.0		135		7		48		85		10			14		310		167.2	
5/16/2023	7	60	10.1		140		10		50		79		7	6		14	14	309	309	166.2	166.1
5/16/2023	8	60	10.2		142		13		62		79		7			14		310		167.5	
5/16/2023	9	60	10.2		141		8		65		87		6			13		309		165.2	
5/16/2023	10	60	10.1		140		6		69		91		6			13		309		165.7	
5/16/2023	11	60	10.0		139		2		55		97		7	6		13		309	309	167.8	166.6
5/16/2023	12	55	9.8		134		11		76		86		10			14		309		165.2	
5/16/2023	13	60	9.8		137		9		65		86		6			14		310		166.0	
5/16/2023	14	60	10.0		139		4		58		93		5			14		310		165.3	
5/16/2023	15	60	9.9		140		6		61		91		4	6		17	14	310	309	167.6	166.0
5/16/2023	16	60	9.9		141		7		69		90		5			14		309		166.6	
5/16/2023	17	60	10.2		139		3		54		94		5			14		309		164.1	
5/16/2023	18	60	9.8		139		1		50		99		4			16		310		167.0	
5/16/2023	19	60	9.8		139		2		54		96		5	5		19		309	309	166.8	166.1
5/16/2023	20	60	9.8		137		7		70		89		4			18		309		165.1	
5/16/2023	21	60	9.8		140		3		51		95		4			12		310		165.6	
5/16/2023	22	60	9.7		137		4		52		93		4			15		309		166.7	
5/16/2023	23	60	9.8		132		8		55		86		4	4		15	15	309	309	166.9	166.1

Average:
Geometric Mean Average:

Limit:

139	5
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

90
≥ 75% 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 COMPLIANCE SUMMARY REPORT



Date 5/16/23

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.
5/16/2023	0	60	10.9		139		15		1		0		1			14		310		166.2	
5/16/2023	1	60	10.8		141		7		0		0		0			14		310		166.8	
5/16/2023	2	60	10.9		138		12		0		0		0			14		310		166.9	
5/16/2023	3	60	10.9		139		12		0		0		1	0		13		310	310	165.7	166.4
5/16/2023	4	60	11.0		147		12		0		0		1			14		310		166.1	
5/16/2023	5	60	11.0		139		6		0		0		3			14		310		165.2	
5/16/2023	6	60	10.7		141		5		0		0		1			13		310		167.1	
5/16/2023	7	60	10.8		138		7		0		0		2	2		13	14	310	310	166.8	166.3
5/16/2023	8	60	10.8		138		14		7		0		2			14		310		166.3	
5/16/2023	9	60	10.5		141		7		0		0		3			13		310		167.5	
5/16/2023	10	60	10.6		140		6	IBCM	151	IBCM	96	IBCM	2			14		310		166.4	
5/16/2023	11	60	10.6		138		5		35		85		3	3		13		310	310	166.8	166.8
5/16/2023	12	60	10.4		141		2		28		94		2			13		310		166.5	
5/16/2023	13	60	10.5		138		7		31		78		2			13		310		167.3	
5/16/2023	14	60	10.8		141		11		37		69		1			13		310		166.1	
5/16/2023	15	60	10.6		141		4		30		86		1	2		13	13	310	310	167.1	166.8
5/16/2023	16	60	10.6		139		3		30		89		1			11		310		167.0	
5/16/2023	17	60	10.6		140		3		28		88		1			14		310		166.3	
5/16/2023	18	60	10.7		140		3		26		88		2			15		310		165.7	
5/16/2023	19	60	10.8		139		2		27		91		1	1		16		310	310	166.7	166.4
5/16/2023	20	60	10.7		141		9		39		78		1			16		310		167.0	
5/16/2023	21	60	10.7		139		7		33		79		1			14		310		166.9	
5/16/2023	22	60	10.7		139		12		39		69		1			14		310		166.5	
5/16/2023	23	60	10.8		140		15		36		59		1	1		13	14	310	310	166.6	166.7

Average:
Geometric Mean Average:

Limit:

140	7
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

0
≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

see above
≥ 12 lb/hr 8-HR. Block Average

see above
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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 16-May-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	2	IC	5	IC	1	1	1	1	1	1	1
7	1	1	1	1	2	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	I	1	I	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 16-May-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	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	IBC	5	IBC	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