



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



Date 12/28/23

Wheel Plant Wheelabrator North Andover
Unit 1 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.	4 Hr Block
12/28/2023	0	1	20.5	IF	8	IF	1	IF	368	IBF	100	IBF	142	IF			14		291		75.1	
12/28/2023	1	0	20.6	IF	0	IF	6	IF	479	IBF	99	IBF	26	IF			0		255		4.2	
12/28/2023	2	0	20.6	IF	0	IF	7	IF	468	IBF	99	IBF	12	IF			0		231		0.0	
12/28/2023	3	5	19.9	ICF	0	ICF	103	ICF	575	IBF	82	IBCF	78	ICF	65	ICF	0		193	243	0.0	19.8
12/28/2023	4	11	17.3	IBCF	63	IBCF	58	IBCF	526	IBF	89	IBCF	535	IBCF			0		192		0.0	
12/28/2023	5	0	20.7	IF	0	IF	6	IF	169	IBCF	96	IBCF	0	IF			0		173		0.0	
12/28/2023	6	0	20.7	IF	0	IF	6	IF	991	IBF	99	IBF	0	IF			0		168		0.0	
12/28/2023	7	0	20.7	IF	0	IF	6	IF	761	IBF	99	IBF	0	IF	134	IBCF	0	2	166	175	0.0	0.0
12/28/2023	8	0	20.7	IF	0	IF	6	IF	756	IBF	99	IBF	0	IF			0		144		0.0	
12/28/2023	9	0	20.7	IF	0	IF	6	IF	877	IBF	99	IBF	0	IF			0		130		0.0	
12/28/2023	10	0	20.7	IF	0	IF	6	IF	868	IBF	99	IBF	0	IF			0		122		0.0	
12/28/2023	11	0	20.7	IF	0	IF	6	IF	928	IBF	99	IBF	0	IF	0	IF	0		116	128	0.0	0.0
12/28/2023	12	0	20.7	IF	0	IF	6	IF	719	IBF	99	IBF	0	IF			0		110		0.0	
12/28/2023	13	0	20.7	IF	0	IF	6	IF	744	IBF	99	IBF	0	IF			0		107		0.0	
12/28/2023	14	0	20.7	IF	0	IF	7	IF	691	IBF	99	IBF	0	IF			0		105		0.0	
12/28/2023	15	0	20.7	IF	0	IF	7	IF	600	IBF	99	IBF	0	IF	0	IF	0	0	100	105	0.0	0.0
12/28/2023	16	0	20.7	IF	0	IF	7	IF	560	IBF	99	IBF	0	IF			0		96		0.0	
12/28/2023	17	0	20.7	IF	0	IF	7	IF	586	IBF	99	IBF	0	IF			0		93		0.0	
12/28/2023	18	0	20.7	IF	0	IF	7	IF	688	IBF	99	IBF	0	IF			0		90		0.0	
12/28/2023	19	0	20.7	IF	0	IF	6	IF	675	IBF	99	IBF	0	IF	0	IF	0		88	92	0.0	0.0
12/28/2023	20	0	20.7	IF	0	IF	7	IF	577	IBF	99	IBF	0	IF			0		94		0.0	
12/28/2023	21	23	17.4	IF	72	IF	3	IF	15	IBF	80	IBF	18	IF			0		120		0.0	
12/28/2023	22	60	17.2		87		0		14		100		2				7		150		5.4	
12/28/2023	23	60	16.5		97		0		11		100		0		1		14	10	190	170	19.0	12.2

Average:
Geometric Mean Average:

Limit:

92	0
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

100
≥ 80% Removal Efficiency

see above
≤ 69 4-HR Block Average

see above
≥ 12 8-HR. Block Average

see above
≤ 345 °F 4-HR Block Average

see above
≤ 173 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 12/28/23

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.
12/28/2023	0	60	9.8		140		0		37		100		4			14		310		167.1	
12/28/2023	1	60	9.9		140		0		30		100		4			14		310		167.7	
12/28/2023	2	60	9.9		139		0		29		100		4			14		310		166.5	
12/28/2023	3	60	9.8		138		0		34		100		4	4		14		310	310	168.2	167.4
12/28/2023	4	60	9.7		141		0		31		100		5			14		310		167.9	
12/28/2023	5	60	9.8		140		0		25		100		5			13		310		166.9	
12/28/2023	6	60	10.0		138		2		69		96		5			13		310		166.5	
12/28/2023	7	60	9.8		140		0		61		100		5	5		13	14	310	310	168.5	167.4
12/28/2023	8	60	9.9		140		0		44		100		6			13		310		167.3	
12/28/2023	9	60	10.1		134		0		32		100		6			13		310		168.0	
12/28/2023	10	60	10.2		140		0		26		100		6			13		310		164.0	
12/28/2023	11	60	10.1		142		0		33		100		6	6		13		310	310	166.4	166.4
12/28/2023	12	60	9.9		139		0		36		100		7			13		310		168.1	
12/28/2023	13	60	9.9		140		0		34		100		6			13		310		167.4	
12/28/2023	14	60	9.9		140		0		34		100		6			15		310		166.8	
12/28/2023	15	60	9.8		140		0		29		100		6	6		14	14	310	310	168.0	167.6
12/28/2023	16	60	9.8		139		0		29		100		6			13		310		166.7	
12/28/2023	17	60	9.8		141		0		27		100		6			13		310		168.0	
12/28/2023	18	60	9.8		138		0		38		100		5			14		310		165.8	
12/28/2023	19	60	9.7		139		0		27		100		6	6		14		310	310	167.1	166.9
12/28/2023	20	60	9.7		139		0		27		100		6			15		310		165.8	
12/28/2023	21	60	9.7		141		0		34		100		5			15		310		167.6	
12/28/2023	22	60	9.8		141		0		30		100		5			14		310		167.6	
12/28/2023	23	60	9.8		139		0		30		100		6	5		14	14	310	310	167.9	167.2

Average:
Geometric Mean Average:

Limit:

140	0
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

100
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 28-Dec-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	IF	0	IF	0	IF	0	IF	0	IF	0
1	0	IF	0	IF	0	IF	0	IF	0	IF	0
2	0	IF	0	IF	0	IF	0	IF	0	IF	0
3	0	IF	0	IF	0	IF	0	IF	0	IF	0
4	0		0	IF	0	IF	0	IF	0	IF	0
5	0	IF	0	IF	0	IF	0	IF	0	IF	0
6	0	ICF	22	ICF	0	IF	0	IF	0	IF	3
7	0	IF	0	IF	0	IF	0	IF	0	IF	0
8	0	IF	0	IF	0	IF	0	IF	0	IF	0
9	0	IF	0	IF	0	IF	0	IF	0	IF	0
10	0	IF	0	IF	0	IF	0	IF	0	IF	0
11	0	IF	0	IF	0	IF	0	IF	0	IF	0
12	0	IF	0	IF	0	IF	0	IF	0	IF	0
13	0	IF	0	IF	0	IF	0	IF	0	IF	0
14	0	IF	0	IF	0	IF	0	IF	0	IF	0
15	0	IF	0	IF	0	IF	0	IF	0	IF	0
16	0	IF	0	IF	0	IF	0	IF	0	IF	0
17	0	IF	0	IF	0	IF	0	IF	0	IF	0
18	0	IF	0	IF	0	IF	0	IF	0	IF	0
19	0	IF	0	IF	0	IF	0	IF	0	IF	0
20	0	IF	0	IF	0	IF	0	IF	0	IF	0
21	0	IF	0	IF	0	IF	0	IF	0	IF	0
22	0		0		0		0		0		0
23	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 28-Dec-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	2	2	2	2	2	2	2	2	2	2	2
1	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2
3	2	2	2	2	2	2	2	2	2	2	2
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	2	2	2	2	2
18	2	2	2	2	2	2	2	2	2	2	2
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	2	2	2	2	2	2
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