



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



Date 2/4/22

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
2/4/2022	0	60	10.2		191		4		5		10		6		14		299		165.4	
2/4/2022	1	60	10.1		195		8		5		0		6		13		300		166.9	
2/4/2022	2	60	10.2		194		7		6		0		6		14		299		166.0	
2/4/2022	3	60	10.3		194		6		3		0		8	7	14		299	299	163.4	165.4
2/4/2022	4	60	10.1		197		13		9		0		7		14		299		167.0	
2/4/2022	5	60	10.2		196		16		21		21		8		14		300		164.4	
2/4/2022	6	60	10.0		196		7		5		0		8		14		299		165.9	
2/4/2022	7	60	10.2		197		18		23		20		9	8	14	14	299	299	165.9	165.8
2/4/2022	8	60	10.2		195		15		25		40		9		13		299		166.1	
2/4/2022	9	60	10.4		189		21		23		9		7		14		299		164.7	
2/4/2022	10	60	10.5		189		13		10	IBCM	0	IBCM	5		14		299		165.6	
2/4/2022	11	60	10.2		196		10		3		0		6	7	14		300	299	165.0	165.3
2/4/2022	12	60	9.9		196		6		2		0		8		14		299		167.0	
2/4/2022	13	60	9.9		196		12		5		0		9		14		300		164.9	
2/4/2022	14	60	10.0		188		12		8		0		7		14		299		165.5	
2/4/2022	15	60	9.9		192		5		5		2		8	8	14	14	299	299	165.3	165.7
2/4/2022	16	60	10.0		194		7		5		0		9		14		299		162.2	
2/4/2022	17	60	9.8		191		11		14		19		8		14		300		160.1	
2/4/2022	18	60	9.8		196		20		53		63		9		15		299		164.1	
2/4/2022	19	60	9.9		197		25		66		62		9	9	13		299	299	163.9	162.6
2/4/2022	20	60	9.9		197		20		51		61		7		14		300		164.3	
2/4/2022	21	60	9.8		196		20		29		32		6		14		299		165.8	
2/4/2022	22	60	9.8		194		17		23		25		7		14		300		163.3	
2/4/2022	23	60	9.7		198		14		20		26		7	7	14	14	299	299	165.9	164.8

Average:
Geometric Mean Average:

Limit:

194	11
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

0
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≤ 12 8-HR. Block Average

lb/hr

see above
≤ 345 4-HR Block Average

°F

see above
≤ 173 4-HR Block Average

klb/hr

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 2/4/22

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.	4 Hr Block
2/4/2022	0	0	20.7	IF	3	IF	6	IF	0	IBF	0	IBF	0	IF		0		593		0.0		
2/4/2022	1	0	20.7	IF	3	IF	7	IF	0	IBF	0	IBF	0	IF		0		593		0.0		
2/4/2022	2	0	20.7	IF	3	IF	7	IF	0	IBF	0	IBF	0	IF		0		593		0.0		
2/4/2022	3	5	19.9	ICF	24	ICF	92	ICF	0	IBF	0	IBCF	13	ICF	3	ICF	0	593	593	0.0	0.0	
2/4/2022	4	12	17.2	IBCF	64	IBCF	60	IBCF	0	IBF	0	IBCF	507	IBCF		0		593		0.0		
2/4/2022	5	0	20.7	IF	1	IF	7	IF	144	IBCF	95	IBCF	0	IF		0		593		0.0		
2/4/2022	6	0	20.7	IF	1	IF	7	IF	0	IBF	0	IBF	0	IF		0		593		0.0		
2/4/2022	7	0	20.7	IF	0	IF	7	IF	0	IBF	0	IBF	0	IF	127	IBCF	0	0	593	593	0.0	0.0
2/4/2022	8	0	20.7	IF	0	IF	7	IF	0	IBF	0	IBF	0	IF			0		593		0.0	
2/4/2022	9	0	20.7	IF	0	IF	7	IF	0	IBMF	0	IBMF	0	IF			0		541		0.0	
2/4/2022	10	0	20.7	IF	0	IF	7	IF	203	IBCMF	97	IBCMF	0	IF		0		69		0.0		
2/4/2022	11	0	20.7	IF	0	IF	7	IF	0	IBMF	0	IBMF	0	IF	0	IF	0	72	319	0.0	0.0	
2/4/2022	12	0	20.7	IF	0	IF	7	IF	0	IBF	0	IBF	0	IF			0	71		0.0		
2/4/2022	13	0	20.7	IF	0	IF	7	IF	0	IBF	0	IBF	0	IF			0	69		0.0		
2/4/2022	14	0	20.6	IF	0	IF	7	IF	0	IBF	0	IBF	0	IF			0	65		0.0		
2/4/2022	15	34	17.0		85		15		0		0		20		20		1	1	80	80	0.0	0.0
2/4/2022	16	60	16.7		128		2		0		0		10				12		104		0.0	
2/4/2022	17	60	16.5		122		5		0		0		6				14		120		12.8	
2/4/2022	18	60	14.7		109		4		0		0		3				14		154		31.2	
2/4/2022	19	60	14.7		118		4		0		0		3	6			14		225	151	45.6	22.4
2/4/2022	20	60	14.8		122		5		0		0		1				14		270		52.9	
2/4/2022	21	60	13.8		132		14		6		0		5				14		281		53.7	
2/4/2022	22	60	12.0		139		13		22		44		105				14		310		112.5	
2/4/2022	23	60	10.0		189		5		34		85		15	32		14	14	311	293	160.4	94.9	

Average: Geometric Mean Average:	127	6	OR	0	see above	see above	see above	
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean	OR	≥ 75% 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 04-Feb-2022

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	6	IC	1	1	1	1	1	1	2
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	2	2	2	1	2	2	1
18	1	1	1	1	1	1	1	1	1	1	1
19	1	1	1	1	1	2	1	1	1	2	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 04-Feb-2022

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	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
1	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
2	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
3	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
4	2		2		2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
5	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
6	2	BCF	23	BCF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	4
7	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
8	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
9	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
10	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
11	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
12	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
13	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
14	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
15	2	IF	2	IF	2	IF	2	IF	2	IF	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