



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



Date 9/28/22

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	1 Hr Avg.
9/28/2022	0	60	10.0		198		16		36		57		5			14		322		165.9	
9/28/2022	1	60	10.1		196		4		27		87		5			14		315		165.5	
9/28/2022	2	60	10.0		187		1		34		98		7			14		305		165.1	
9/28/2022	3	60	10.2		196		1		36		99		5	6		14		295	309	166.0	165.6
9/28/2022	4	60	10.2		196		5		44		88		5			14		300		165.6	
9/28/2022	5	60	10.3		197		5		40		88		5			14		305		163.4	
9/28/2022	6	60	10.0		198		2		26		94		5			14		307		164.6	
9/28/2022	7	60	10.4		196		14		46		71		5	5		14	14	307	305	166.4	165.0
9/28/2022	8	60	11.0		194		5		37		86		6			14		302		157.8	
9/28/2022	9	60	10.6		198		10		57		82		8			14		301		155.3	
9/28/2022	10	60	10.3		198		12		55		77		5			14		311		163.1	
9/28/2022	11	60	10.2		196		11		44		76		7	7		14		313	307	166.6	160.7
9/28/2022	12	60	10.5		195		13		40		69		6			14		318		165.7	
9/28/2022	13	60	10.4		199		5		31		83		4			14		316		166.7	
9/28/2022	14	60	10.3		196		8		36		78		6			14		309		167.4	
9/28/2022	15	60	10.3		198		11		37		71		6	5		14	14	315	314	165.6	166.3
9/28/2022	16	60	10.4		197		10		43		77		5			14		312		165.6	
9/28/2022	17	60	10.4		196		4		35		89		6			14		308		165.0	
9/28/2022	18	60	10.6		190		5		44		90		6			14		312		165.6	
9/28/2022	19	60	10.3		194		4		45		91		6	6		14		302	309	167.9	166.0
9/28/2022	20	60	10.3		199		7		44		85		7			14		305		165.5	
9/28/2022	21	60	10.3		197		7		51		86		7			14		307		164.2	
9/28/2022	22	60	10.3		199		14		55		75		7			14		309		166.5	
9/28/2022	23	60	10.1		197		7		41		83		6	7		14	14	314	309	166.1	165.6

Average: Geometric Mean Average:	196	6	OR	86	see above	see above	see above	see above			
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 4-HR Block Average	ppmc	≥ 12 8-HR. Block Average	lb/hr	≤ 345 °F 4-HR Block Average	≤ 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 9/28/22

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
9/28/2022	0	0	20.9	IF	5	IF	6	IF	0	IBF	0	IBF	0	IF		0		71		0.0		
9/28/2022	1	0	20.9	IF	5	IF	6	IF	0	IBF	0	IBF	0	IF		0		70		0.0		
9/28/2022	2	0	20.9	IF	5	IF	6	IF	0	IBF	0	IBF	0	IF		0		69		0.0		
9/28/2022	3	5	20.1	ICF	5	ICF	5	ICF	0	IBF	0	IBCF	0	ICF	0	ICF	0	68	70	0.0	0.0	
9/28/2022	4	12	17.3	IBCF	99	IBCF	69	IBCF	0	IBF	0	IBCF	415	IBCF		0		68		0.0		
9/28/2022	5	0	20.9	IF	5	IF	6	IF	161	IBCF	96	IBCF	0	IF		0		67		0.0		
9/28/2022	6	0	20.9	IF	6	IF	6	IF	0	IBF	0	IBF	0	IF		0		66		0.0		
9/28/2022	7	0	20.9	IF	6	IF	6	IF	0	IBF	0	IBF	0	IF	104	IBCF	0	0	67	67	0.0	0.0
9/28/2022	8	0	20.9	IF	6	IF	6	IF	0	IBF	0	IBF	0	IF		0		68		0.0		
9/28/2022	9	0	20.9	IF	6	IF	6	IF	0	IBF	0	IBF	0	IF		0		70		0.0		
9/28/2022	10	0	20.9	IF	6	IF	6	IF	0	IBF	0	IBF	0	IF		0		71		0.0		
9/28/2022	11	0	20.9	IF	6	IF	5	IF	0	IBF	0	IBF	0	IF	0	IF	0	72	70	0.0	0.0	
9/28/2022	12	0	20.9	IF	7	IF	5	IF	0	IBF	0	IBF	0	IF		0		73		0.0		
9/28/2022	13	0	20.9	IF	6	IF	6	IF	0	IBF	0	IBF	0	IF		0		73		0.0		
9/28/2022	14	0	20.9	IF	6	IF	6	IF	0	IBF	0	IBF	0	IF		0		74		0.0		
9/28/2022	15	0	20.9	IF	6	IF	6	IF	0	IBF	0	IBF	0	IF	0	IF	0	75	74	0.0	0.0	
9/28/2022	16	0	20.9	IF	6	IF	5	IF	0	IBF	0	IBF	0	IF		0		75		0.0		
9/28/2022	17	0	20.9	IF	6	IF	5	IF	0	IBF	0	IBF	0	IF		0		74		0.0		
9/28/2022	18	0	20.9	IF	6	IF	5	IF	0	IBF	0	IBF	0	IF		0		73		0.0		
9/28/2022	19	0	20.9	IF	6	IF	5	IF	0	IBF	0	IBF	0	IF	0	IF	0	74	74	0.0	0.0	
9/28/2022	20	0	20.9	IF	6	IF	5	IF	0	IBF	0	IBF	0	IF		0		73		0.0		
9/28/2022	21	0	20.9	IF	6	IF	5	IF	-1	IBF	0	IBF	0	IF		0		72		0.0		
9/28/2022	22	0	20.9	IF	6	IF	5	IF	0	IBF	0	IBF	0	IF		0		72		0.0		
9/28/2022	23	0	20.9	IF	6	IF	5	IF	0	IBF	0	IBF	0	IF	0	IF	0	72	72	0.0	0.0	

Average:	10 IBCF	6 IBCF	0 IBCF	see above	see above	see above
Geometric Mean Average:				≤ 69 ppmc	≥ 12 lb/hr	≤ 173 klb/hr
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean	OR	≥ 75% Removal Efficiency	8-HR. Block Average	≤ 345 °F 4-HR Block Average

Status Flags

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 28-Sep-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	0	1	1
2	1	1	0	1	1	1	1	1	1	1	0
3	1	1	1	0	1	1	1	1	0	1	0
4	0	1	1	1	1	1	1	1	1	1	0
5	1	1	1	0	0	0	0	0	0	0	0
6	3	IC	5	IC	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	0	1	1	1	1	1	1	1	1	0
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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



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

Status Flags

I - Invalid C - Calibration F - Offline T - Out of Control ^ - Startup
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown