



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



Date 1/23/22

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
1/23/2022	0	0	20.9	IF	8	IF	6	IF	2	IBF	0	IBF	0	IF		0		544		0.0		
1/23/2022	1	0	20.9	IF	9	IF	6	IF	2	IBF	0	IBF	0	IF		0		544		0.0		
1/23/2022	2	0	20.9	IF	9	IF	6	IF	2	IBF	0	IBF	0	IF		0		544		0.0		
1/23/2022	3	5	20.0	ICF	8	ICF	6	ICF	5	IBF	0	IBCF	0	ICF	0	ICF	0	544	544	0.0	0.0	
1/23/2022	4	13	17.1	IBCF	84	IBCF	57	IBCF	7	IBF	0	IBCF	502	IBCF		0		544		0.0		
1/23/2022	5	0	20.9	IF	8	IF	7	IF	142	IBCF	95	IBCF	0	IF		0		544		0.0		
1/23/2022	6	0	20.9	IF	8	IF	7	IF	12	IBF	44	IBF	0	IF		0		544		0.0		
1/23/2022	7	0	20.9	IF	9	IF	7	IF	8	IBF	19	IBF	0	IF	125	IBCF	0	0	544	544	0.0	0.0
1/23/2022	8	0	20.9	IF	9	IF	7	IF	9	IBF	26	IBF	0	IF		0		544		0.0		
1/23/2022	9	0	20.9	IF	8	IF	7	IF	6	IBF	0	IBF	0	IF		0		544		0.0		
1/23/2022	10	0	20.9	IF	8	IF	7	IF	7	IBF	6	IBF	0	IF		0		544		0.0		
1/23/2022	11	0	20.9	IF	9	IF	7	IF	4	IBF	0	IBF	0	IF	0	IF	0	544	544	0.0	0.0	
1/23/2022	12	0	20.9	IF	9	IF	7	IF	9	IBF	28	IBF	0	IF		0		544		0.0		
1/23/2022	13	0	20.9	IF	9	IF	7	IF	16	IBF	59	IBF	0	IF		0		544		0.0		
1/23/2022	14	0	20.9	IF	9	IF	7	IF	20	IBF	67	IBF	0	IF		1		544		0.0		
1/23/2022	15	0	20.9	IF	9	IF	7	IF	21	IBF	67	IBF	0	IF	0	IF	0	0	544	544	0.0	0.0
1/23/2022	16	0	20.9	IF	9	IF	7	IF	20	IBF	66	IBF	0	IF		1		544		0.0		
1/23/2022	17	0	20.9	IF	9	IF	7	IF	23	IBF	70	IBF	0	IF		1		544		0.0		
1/23/2022	18	0	20.9	IF	10	IF	7	IF	23	IBF	70	IBF	0	IF		1		544		0.0		
1/23/2022	19	0	20.9	IF	10	IF	7	IF	26	IBF	74	IBF	0	IF	0	IF	0	0	544	544	0.0	0.0
1/23/2022	20	0	20.9	IF	10	IF	7	IF	25	IBF	72	IBF	0	IF		1		544		0.0		
1/23/2022	21	0	20.9	IF	12	IF	7	IF	25	IBF	72	IBF	0	IF		0		544		0.0		
1/23/2022	22	0	20.9	IF	12	IF	7	IF	29	IBF	75	IBF	0	IF		1		544		0.0		
1/23/2022	23	0	20.9	IF	12	IF	7	IF	31	IBF	76	IBF	0	IF	0	IF	0	1	544	544	0.0	0.0

Average:
Geometric Mean Average:

Limit:

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

OR

0	IBCF
≥ 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 1/23/22

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.
1/23/2022	0	60	9.4		157		1		15		94		12			14		309		162.4	
1/23/2022	1	60	8.8		187		1		15		93		1			14		311		165.0	
1/23/2022	2	60	8.8		182		1		13		92		1			14		313		165.8	
1/23/2022	3	60	8.9		184		2		15		87		1	4		14		310	311	165.6	164.7
1/23/2022	4	60	8.9		174		1		13		90		2			14		310		165.9	
1/23/2022	5	60	9.0		188		3		17		83		1			14		310		166.0	
1/23/2022	6	60	9.0		184		8		22		62		3			14		310		166.0	
1/23/2022	7	60	8.9		186		11		26		58		2	2		14	14	310	310	165.8	165.9
1/23/2022	8	60	8.8		182		12		24		50		2			14		310		165.4	
1/23/2022	9	60	8.8		178		7		21		67		2			14		310		165.7	
1/23/2022	10	60	8.9		168		4		16		76		1			14		310		165.8	
1/23/2022	11	60	9.0		174		6		20		69		2	2		14		310	310	165.5	165.6
1/23/2022	12	60	8.9		176		10		29		66		3			14		310		165.6	
1/23/2022	13	58	8.7		165		4		19		80		2			14		310		165.7	
1/23/2022	14	60	9.0		173		4		18		77		2			14		310		165.7	
1/23/2022	15	60	9.1		176		12		22		45		4	3		14	14	310	310	165.6	165.6
1/23/2022	16	60	9.1		167		3		15		79		3			14		310		166.0	
1/23/2022	17	60	8.9		174		2		18		89		2			14		310		166.1	
1/23/2022	18	60	9.0		168		6		21		73		2			14		310		165.3	
1/23/2022	19	60	8.9		167		6		21		72		2	2		14		310	310	166.2	165.9
1/23/2022	20	60	8.8		167		4		21		83		2			14		310		165.9	
1/23/2022	21	60	9.1		150		0		14		98		3			14		309		163.2	
1/23/2022	22	60	9.1		167		6		39		84		1			14		310		166.0	
1/23/2022	23	60	9.1		169		9		39		78		1	2		14	14	310	310	166.4	165.4

Average: Geometric Mean Average:	173	4	OR	81	see above	see above	see above	
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 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 23-Jan-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	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	ICF	23	ICF	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	IF	2	IF	2	IF	2	IF	2	IF	2
16	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
17	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
18	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
19	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
20	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
21	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
22	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
23	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2

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 23-Jan-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	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	2	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	I	I	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
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