



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



Date 12/9/22

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
12/9/2022	0	0	20.9	IF	21	IF	9	IF	-426	IBF	0	IBF	0	IF			2		61		0.0	
12/9/2022	1	0	20.9	IF	20	IF	9	IF	-413	IBF	0	IBF	0	IF			3		60		0.0	
12/9/2022	2	0	20.9	IF	20	IF	9	IF	-434	IBF	0	IBF	0	IF			3		59		0.0	
12/9/2022	3	5	20.1	ICF	18	ICF	8	ICF	-390	IBF	0	IBCF	1	ICF	0	ICF	3		58	60	0.0	0.0
12/9/2022	4	12	17.4	IBCF	135	IBCF	69	IBCF	-386	IBF	0	IBCF	555	IBCF			3		58		0.0	
12/9/2022	5	0	20.9	IF	22	IF	9	IF	181	IBCF	95	IBCF	0	IF			3		58		0.0	
12/9/2022	6	0	20.9	IF	21	IF	9	IF	-296	IBF	0	IBF	0	IF			3		57		0.0	
12/9/2022	7	0	20.9	IF	21	IF	9	IF	-357	IBF	0	IBF	0	IF	139	IBCF	3	3	57	57	0.0	0.0
12/9/2022	8	0	20.9	IF	21	IF	8	IF	-323	IBF	0	IBF	0	IF			3		57		0.0	
12/9/2022	9	0	20.9	IF	21	IF	9	IF	-329	IBF	0	IBF	0	IF			3		57		0.0	
12/9/2022	10	0	20.9	IF	20	IF	9	IF	-320	IBMF	0	IBMF	0	IF			2		57		0.0	
12/9/2022	11	0	20.9	IF	19	IF	9	IF	-300	IBMF	0	IBMF	0	IF	0	IF	1		58	57	0.0	0.0
12/9/2022	12	0	20.9	IF	19	IF	9	IF	-281	IBF	0	IBF	0	IF			0		58		0.0	
12/9/2022	13	0	20.9	IF	18	IF	9	IF	-262	IBF	0	IBF	0	IF			0		58		0.0	
12/9/2022	14	0	20.9	IF	17	IF	8	IF	-258	IBF	0	IBF	0	IF			1		58		0.0	
12/9/2022	15	0	20.9	IF	17	IF	8	IF	-282	IBF	0	IBF	0	IF	0	IF	1	1	59	58	0.0	0.0
12/9/2022	16	0	20.9	IF	18	IF	9	IF	-303	IBF	0	IBF	0	IF			0		59		0.0	
12/9/2022	17	0	20.9	IF	17	IF	8	IF	-280	IBF	0	IBF	0	IF			1		58		0.0	
12/9/2022	18	0	20.9	IF	17	IF	8	IF	-253	IBF	0	IBF	0	IF			2		57		0.0	
12/9/2022	19	0	20.9	IF	20	IF	9	IF	-237	IBF	0	IBF	0	IF	0	IF	2		51	56	0.0	0.0
12/9/2022	20	0	20.9	IF	21	IF	9	IF	-218	IBF	0	IBF	0	IF			3		50		0.0	
12/9/2022	21	0	20.9	IF	21	IF	9	IF	-219	IBF	0	IBF	0	IF			3		50		0.0	
12/9/2022	22	0	20.9	IF	21	IF	9	IF	-204	IBF	0	IBF	0	IF			3		49		0.0	
12/9/2022	23	0	20.9	IF	21	IF	9	IF	-205	IBF	0	IBF	0	IF	0	IF	4	2	50	50	0.0	0.0

Average:
Geometric Mean Average:

Limit:

24 IBCF	9 IBCF	0 IBCMF
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean	≥ 75% Removal Efficiency

OR

see above
≤ 69 4-HR Block Average

see above	see above	see above
≥ 12 8-HR. Block Average	≤ 345 °F 4-HR Block Average	≤ 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 12/9/22

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.
12/9/2022	0	60	10.2		195		6		3		0		2			13		310		165.1	
12/9/2022	1	60	10.4		183		9		4		0		3			14		310		166.4	
12/9/2022	2	60	10.4		189		9		4		0		3			14		310		165.5	
12/9/2022	3	60	10.5		186		10		8		0		3	3		13		310	310	166.5	165.9
12/9/2022	4	60	10.5		188		11		10		0		4			14		310		165.3	
12/9/2022	5	60	10.4		191		6		9		36		2			13		310		165.5	
12/9/2022	6	60	10.4		194		4		5		17		2			14		310		166.4	
12/9/2022	7	60	10.5		195		8		11		28		2	3		14	14	310	310	165.9	165.8
12/9/2022	8	60	10.5		188		6		7		10		3			14		310		166.3	
12/9/2022	9	60	10.7		186		3		3		0		3			14		310		166.1	
12/9/2022	10	60	10.8		175		6		6		3		2			14		310		166.4	
12/9/2022	11	60	10.7		178		3		9		62		2	2		14		310	310	166.6	166.4
12/9/2022	12	60	10.8		177		14		27		47		6			14		310		166.0	
12/9/2022	13	60	10.6		195		20		23		10		3			14		311		165.1	
12/9/2022	14	60	10.4		194		28		44		37		3			14		311		166.4	
12/9/2022	15	60	9.9		190		8		15		50		3	4		14	14	311	311	166.7	166.0
12/9/2022	16	60	10.2		192		7		12		39		2			14		310		166.5	
12/9/2022	17	60	10.7		190		8		13		39		1			14		311		165.3	
12/9/2022	18	60	10.6		197		18		35		47		3			13		311		165.9	
12/9/2022	19	60	10.9		196		27		61		56		3	2		14		311	311	166.1	165.9
12/9/2022	20	60	10.9		198		24		45		47		3			13		311		165.4	
12/9/2022	21	60	10.7		190		18		27		34		2			14		311		166.9	
12/9/2022	22	60	10.7		193		13		22		41		2			14		311		166.7	
12/9/2022	23	60	10.9		181		15		23		35		1	2		14	14	311	311	165.6	166.1

Average: Geometric Mean Average:	189	10	OR	21	see above	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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 09-Dec-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	IF	1	IF	1	IF	1	IF	1	IF	0	IF	1	IF	1	IF	1	IF	0	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	ICF	23	ICF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	4
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



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Date 09-Dec-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	1	1	1	1	1	2	2	2	1	1
1	1	1	1	1	1	1	2	2	2	2	1
2	2	2	2	1	1	1	1	2	2	1	1
3	2	2	2	2	1	1	1	1	1	1	1
4	1	1	1	1	1	1	2	2	2	1	1
5	2	2	2	2	2	2	2	2	1	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	1	1	1	1	1	1	1	1
10	2	2	2	2	2	1	2	1	1	1	2
11	2	1	2	2	2	1	2	1	1	1	1
12	1	1	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	1	1	1	1	1	1	1	1	2	1	1
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

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