



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



Date 1/19/22

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
1/19/2022	0	0	20.8	IF	10	IF	8	IF	18	IBF	58	IBF	1	IF			0		592		0.0	
1/19/2022	1	0	20.8	IF	10	IF	8	IF	11	IBF	34	IBF	0	IF			0		592		0.0	
1/19/2022	2	0	20.8	IF	10	IF	8	IF	4	IBF	0	IBF	0	IF			0		592		0.0	
1/19/2022	3	5	20.0	ICF	143	ICF	110	ICF	1	IBF	0	IBCF	20	ICF	5	ICF	1		592	592	0.0	0.0
1/19/2022	4	13	17.1	IBCF	92	IBCF	60	IBCF	1	IBF	0	IBCF	532	IBCF			0		592		0.0	
1/19/2022	5	0	20.8	IF	12	IF	8	IF	140	IBCF	95	IBCF	0	IF			0		592		0.0	
1/19/2022	6	0	20.8	IF	13	IF	8	IF	0	IBF	0	IBF	0	IF			0		592		0.0	
1/19/2022	7	0	20.8	IF	13	IF	8	IF	0	IBF	0	IBF	0	IF	133	IBCF	0	0	592	592	0.0	0.0
1/19/2022	8	0	20.8	IF	14	IF	8	IF	0	IBF	0	IBF	0	IF			0		592		0.0	
1/19/2022	9	0	20.8	IF	14	IF	8	IF	0	IBF	0	IBF	0	IF			0		592		0.0	
1/19/2022	10	0	20.8	IF	16	IF	8	IF	0	IBF	0	IBF	0	IF			0		592		0.0	
1/19/2022	11	0	20.8	IF	18	IF	8	IF	0	IBF	0	IBF	0	IF	0	IF	1		592	592	0.0	0.0
1/19/2022	12	0	20.9	IF	20	IF	8	IF	0	IBF	0	IBF	0	IF			0		592		0.0	
1/19/2022	13	0	20.9	IF	21	IF	9	IF	2	IBF	0	IBF	0	IF			0		592		0.0	
1/19/2022	14	0	20.9	IF	22	IF	9	IF	12	IBF	29	IBF	0	IF			0		592		0.0	
1/19/2022	15	0	20.9	IF	23	IF	9	IF	19	IBF	56	IBF	0	IF	0	IF	0	0	592	592	0.0	0.0
1/19/2022	16	0	20.9	IF	24	IF	9	IF	20	IBF	58	IBF	0	IF			0		535		0.0	
1/19/2022	17	0	20.9	IF	24	IF	8	IF	21	IBF	60	IBF	0	IF			0		544		0.0	
1/19/2022	18	0	20.9	IF	25	IF	8	IF	25	IBF	66	IBF	0	IF			0		544		0.0	
1/19/2022	19	0	20.9	IF	22	IF	8	IF	31	IBF	74	IBF	0	IF	0	IF	0		544	541	0.0	0.0
1/19/2022	20	0	20.9	IF	21	IF	8	IF	39	IBF	79	IBF	0	IF			0		544		0.0	
1/19/2022	21	0	20.9	IF	20	IF	8	IF	43	IBF	81	IBF	0	IF			0		544		0.0	
1/19/2022	22	0	20.9	IF	20	IF	8	IF	43	IBF	81	IBF	0	IF			0		544		0.0	
1/19/2022	23	0	20.9	IF	19	IF	8	IF	49	IBF	84	IBF	0	IF	0	IF	0	0	544	544	0.0	0.0

Average:
Geometric Mean Average:

Limit:

26 IBCF
≤ 205 24-HR Block Avg.

OR

10 IBCF
≤ 29 24-HR Geometric Mean

0 IBCF
≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

see above
≤ 12 lb/hr 8-HR. Block Average

see above
≤ 345 °F 4-HR Block Average

see above
≤ 173 klb/hr 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 1/19/22

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.
1/19/2022	0	60	9.4		184		1		23		95		7			14		312		165.0	
1/19/2022	1	60	9.4		191		0		18		99		6			14		310		166.0	
1/19/2022	2	60	9.2		176		1		22		97		7			14		310		165.4	
1/19/2022	3	60	9.4		183		0		21		98		5	6		14		309	310	164.5	165.2
1/19/2022	4	60	9.5		170		0		22		99		3			14		310		165.6	
1/19/2022	5	60	9.3		191		0		24		99		4			14		310		165.5	
1/19/2022	6	60	9.3		195		1		26		98		3			14		310		165.8	
1/19/2022	7	60	9.4		192		1		24		97		3	4		14	14	311	310	165.2	165.5
1/19/2022	8	60	9.2		182		1		27		95		5			14		308		164.6	
1/19/2022	9	60	9.3		178		6		43		86		5			14		310		165.0	
1/19/2022	10	60	9.1		171		3		38	IBF	93	IBF	5			14		310		164.9	
1/19/2022	11	60	9.0		193		1		21		97		3	4		13		310	310	165.6	165.0
1/19/2022	12	58	9.2		192		0		18		99		2			14		310		164.4	
1/19/2022	13	60	9.1		191		3		31		92		2			14		310		162.7	
1/19/2022	14	60	9.1		185		5		34		86		3			14		310		166.2	
1/19/2022	15	60	9.1		181		2		26		92		2	2		14	14	310	310	165.9	164.8
1/19/2022	16	60	9.1		186		0		14		99		2			13		310		165.8	
1/19/2022	17	60	9.1		193		0		18		98		1			14		310		165.5	
1/19/2022	18	60	9.3		183		0		17		98		1			14		310		165.8	
1/19/2022	19	60	9.2		191		3		25		89		2	1		14		310	310	166.2	165.8
1/19/2022	20	60	9.0		195		3		24		88		2			14		310		166.1	
1/19/2022	21	60	9.1		189		4		27		85		2			14		310		165.8	
1/19/2022	22	60	9.3		187		6		34		83		2			14		310		165.4	
1/19/2022	23	60	9.1		193		3		24		87		2	2		14	14	310	310	166.1	165.8

Average:
Geometric Mean Average:

Limit:

186	1
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

96
≥ 75% 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 19-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	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	2		1		2	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	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	1
11	2	IF	2	IF	1	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	1
12	2	IF	2	IF	2	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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 19-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	I	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