



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



Date 6/13/22

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
6/13/2022	0	0	20.9	IF	76	IF	8	IF	169	IBF	96	IBF	14	IF			1		269		22.6	
6/13/2022	1	0	20.9	IF	62	IF	9	IF	151	IBF	94	IBF	3	IF			0		234		5.8	
6/13/2022	2	0	20.9	IF	62	IF	8	IF	140	IBF	94	IBF	0	IF			0		197		2.7	
6/13/2022	3	5	20.1	ICF	58	ICF	8	ICF	136	IBF	94	IBCF	1	ICF	5	ICF	0		160	215	0.0	7.8
6/13/2022	4	12	17.4	IBCF	256	IBCF	68	IBCF	134	IBF	49	IBCF	549	IBCF			0		156		0.0	
6/13/2022	5	0	20.9	IF	64	IF	10	IF	149	IBCF	93	IBCF	0	IF			0		132		0.0	
6/13/2022	6	0	20.9	IF	66	IF	8	IF	159	IBF	95	IBF	0	IF			0		128		0.0	
6/13/2022	7	0	20.9	IF	67	IF	8	IF	176	IBF	96	IBF	0	IF	137	IBCF	0	0	147	141	0.0	0.0
6/13/2022	8	0	20.9	IF	66	IF	7	IF	189	IBF	96	IBF	0	IF			0		133		0.0	
6/13/2022	9	0	20.9	IF	64	IF	6	IF	203	IBF	97	IBF	0	IF			0		121		0.0	
6/13/2022	10	0	20.9	IF	67	IF	7	IF	324	IBF	98	IBF	0	IF			0		113		0.0	
6/13/2022	11	0	20.9	IF	63	IF	7	IF	383	IBF	98	IBF	0	IF	0	IF	0		108	119	0.0	0.0
6/13/2022	12	0	20.9	IF	62	IF	7	IF	339	IBF	98	IBF	0	IF			0		106		0.0	
6/13/2022	13	0	20.9	IF	58	IF	8	IF	340	IBF	98	IBF	0	IF			0		105		0.0	
6/13/2022	14	0	20.9	IF	54	IF	8	IF	281	IBF	97	IBF	0	IF			0		105		0.0	
6/13/2022	15	0	21.0	IF	49	IF	8	IF	321	IBF	98	IBF	0	IF	0	IF	0	0	104	105	0.0	0.0
6/13/2022	16	0	21.0	IF	45	IF	8	IF	269	IBF	97	IBF	0	IF			0		103		0.0	
6/13/2022	17	0	21.0	IF	46	IF	8	IF	287	IBF	97	IBF	0	IF			0		104		0.0	
6/13/2022	18	0	21.0	IF	46	IF	8	IF	261	IBF	97	IBF	0	IF			0		100		0.0	
6/13/2022	19	0	21.0	IF	46	IF	8	IF	239	IBF	97	IBF	0	IF	0	IF	0		98	101	0.0	0.0
6/13/2022	20	0	20.7	IF	55	IF	7	IF	68	IBF	89	IBF	5	IF			0		104		0.0	
6/13/2022	21	0	20.3	IF	72	IF	6	IF	30	IBF	79	IBF	7	IF			0		150		0.0	
6/13/2022	22	0	21.0	IF	59	IF	6	IF	228	IBF	97	IBF	0	IF			0		138		0.0	
6/13/2022	23	0	21.0	IF	55	IF	7	IF	191	IBF	97	IBF	0	IF	3	IF	0	0	129	130	0.0	0.0

Average: Geometric Mean Average:	68 IBCF	8 IBCF	0 IBCF	OR	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	≤ 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 6/13/22

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.
6/13/2022	0	60	10.3		190		16		44		64		1			14		314		166.3	
6/13/2022	1	60	10.5		197		12		35		66		1			14		316		167.4	
6/13/2022	2	60	10.4		194		11		31		64		2			14		315		165.2	
6/13/2022	3	60	10.1		191		16		42		61		1	1		14		316	315	171.4	167.5
6/13/2022	4	60	10.1		192		8		35		77		3			14		304		165.9	
6/13/2022	5	60	9.7		188		20		56		64		2			14		307		169.9	
6/13/2022	6	60	10.1		190		18		44		59		2			14		310		165.8	
6/13/2022	7	60	10.2		185		15		30		52		2	2		14	14	312	308	164.9	166.6
6/13/2022	8	60	10.6		190		13		22		42		2			14		317		166.7	
6/13/2022	9	60	10.6		188		11		28		60		4			14		312		159.6	
6/13/2022	10	60	10.3		188		17		33		48		4			14		319		163.3	
6/13/2022	11	60	10.4		196		28		58		52		4	4		14		315	316	165.9	163.9
6/13/2022	12	60	10.3		196		23		33		30		2			14		312		166.2	
6/13/2022	13	60	10.4		197		7		15		51		2			14		313		165.4	
6/13/2022	14	60	10.5		195		3		15		80		3			14		306		164.9	
6/13/2022	15	60	10.3		198		8		16		51		3	2		14	14	306	309	165.9	165.6
6/13/2022	16	60	10.5		198		7		16		58		3			14		306		165.9	
6/13/2022	17	60	10.3		197		3		11		74		3			14		308		165.6	
6/13/2022	18	60	10.4		197		5		12		62		3			14		309		165.8	
6/13/2022	19	60	10.5		196		6		13		52		3	3		14		309	308	165.5	165.7
6/13/2022	20	60	10.4		195		5		14		63		3			14		307		165.0	
6/13/2022	21	60	10.3		196		4		18		79		3			14		299		165.8	
6/13/2022	22	60	10.2		198		6		15		57		2			14		306		164.8	
6/13/2022	23	60	10.3		197		14		15		10		2	2		14	14	315	307	166.3	165.5

Average:
Geometric Mean Average:

Limit:

194	10
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

60
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 13-Jun-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

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 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 13-Jun-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	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	1	1	1	0	0
4	1	0	1	1	1	1	1	1	1	1	0
5	1	0	0	1	1	1	1	1	1	1	1
6	2	IBC	5	IBC	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	1	1	1	1	1	1	1	1	1	1
11	1	1	1	1	0	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	0	0	0	0	0	0	0
22	1	1	1	1	1	1	1	1	1	1	1
23	1	1	1	0	1	1	1	1	1	1	1

Status Flags

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