



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



Date 4/1/23

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
4/1/2023	0	0	20.8	IF	25	IF	9	IF	-1057	IBF	0	IBF	0	IF			0		58		0.0	
4/1/2023	1	0	20.8	IF	26	IF	9	IF	-1010	IBF	0	IBF	0	IF			0		58		0.0	
4/1/2023	2	0	20.8	IF	27	IF	10	IF	-1051	IBF	0	IBF	0	IF			0		58		0.0	
4/1/2023	3	5	20.0	ICF	25	ICF	9	ICF	-966	IBF	0	IBCF	1	ICF	0	ICF	0		58	58	0.0	0.0
4/1/2023	4	12	17.3	IBCF	143	IBCF	68	IBCF	-978	IBF	0	IBCF	534	IBCF			0		58		0.0	
4/1/2023	5	0	20.8	IF	26	IF	9	IF	209	IBCF	96	IBCF	0	IF			0		58		0.0	
4/1/2023	6	0	20.8	IF	25	IF	8	IF	-851	IBF	0	IBF	0	IF			1		58		0.0	
4/1/2023	7	0	20.8	IF	26	IF	8	IF	-996	IBF	0	IBF	0	IF	133	IBCF	0	0	58	58	0.0	0.0
4/1/2023	8	0	20.9	IF	26	IF	8	IF	-781	IBF	0	IBF	0	IF			0		57		0.0	
4/1/2023	9	0	20.9	IF	25	IF	8	IF	-617	IBF	0	IBF	0	IF			0		55		0.0	
4/1/2023	10	0	20.9	IF	26	IF	8	IF	-614	IBF	0	IBF	0	IF			1		58		0.0	
4/1/2023	11	0	20.8	IF	28	IF	8	IF	-930	IBF	0	IBF	0	IF	0	IF	0		59	57	0.0	0.0
4/1/2023	12	0	20.8	IF	29	IF	9	IF	-1130	IBF	0	IBF	0	IF			0		59		0.0	
4/1/2023	13	0	20.9	IF	32	IF	8	IF	-991	IBF	0	IBF	0	IF			1		57		0.0	
4/1/2023	14	0	20.9	IF	35	IF	7	IF	-927	IBF	0	IBF	0	IF			0		59		0.0	
4/1/2023	15	0	20.4	IF	39	IF	16	IF	304	IBF	95	IBF	29	IF	7	IF	0	0	63	59	0.0	0.0
4/1/2023	16	7	17.6	IF	346	IF	14	IF	33	IBF	58	IBF	19	IF			0		87		0.0	
4/1/2023	17	12	17.1	IF	336	IF	9	IF	30	IBF	69	IBF	36	IF			3		95		0.0	
4/1/2023	18	18	17.4	IF	347	IF	53	IF	33	IBF	0	IBF	405	IF			11		120		0.6	
4/1/2023	19	17	17.4	IF	362	IF	18	IF	37	IBF	50	IBF	55	IF	129	IF	11		137	110	10.5	2.8
4/1/2023	20	32	17.0		351		15		33		56		28				11		161		19.9	
4/1/2023	21	60	15.3		259		10		20		52		19				11		192		34.8	
4/1/2023	22	60	13.1		200		6		18		68		14				11		219		51.9	
4/1/2023	23	60	12.2		180		5		23		77		15		19		12	11	233	201	59.4	41.5

Average: Geometric Mean Average:	247	8	OR	65	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

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 4/1/23

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.
4/1/2023	0	60	10.6		141		10		55		81		1			13		310		166.7	
4/1/2023	1	60	10.7		139		11		51		79		1			13		310		165.8	
4/1/2023	2	60	10.5		139		6		40		85		1			13		310		167.2	
4/1/2023	3	60	10.6		139		12		53		78		1	1		13		310	310	166.1	166.4
4/1/2023	4	60	10.7		146		20		64		70		3			13		310		165.7	
4/1/2023	5	60	10.3		138		17		72		77		2			13		310		167.2	
4/1/2023	6	60	10.4		140		6		44		86		2			13		309		165.1	
4/1/2023	7	60	10.4		139		7		48		86		3	3		13	13	310	310	166.2	166.1
4/1/2023	8	60	10.7		140		6		44		86		2			13		310		166.7	
4/1/2023	9	60	10.9		139		5		43		89		2			13		310		165.7	
4/1/2023	10	60	10.4		140		2		35		93		2			13		310		166.2	
4/1/2023	11	60	10.6		136		9		42		80		3	2		13		309	310	165.1	165.9
4/1/2023	12	60	10.3		143		8		49		83		2			13		310		167.3	
4/1/2023	13	60	10.2		138		8		45		82		2			13		310		167.0	
4/1/2023	14	60	10.2		140		10		45		77		2			13		310		165.8	
4/1/2023	15	60	10.2		140		7		38		83		1	2		13	13	310	310	166.2	166.6
4/1/2023	16	60	10.2		141		15		52		70		1			13		310		167.0	
4/1/2023	17	60	10.1		137		17		56		69		1			13		310		166.5	
4/1/2023	18	60	10.1		142		21		64		67		1			13		310		167.1	
4/1/2023	19	60	10.3		137		19		57		67		1	1		14		310	310	166.0	166.6
4/1/2023	20	60	10.2		142		19		73		74		1			13		310		166.4	
4/1/2023	21	60	10.2		139		17		72		76		1			13		310		165.8	
4/1/2023	22	60	10.1		141		12		68		83		1			13		310		167.6	
4/1/2023	23	60	10.2		139		1		48		98		1	1		13	13	310	310	165.8	166.4

Average:
Geometric Mean Average:

Limit:

140	9
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

82
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≥ 12 8-HR. Block Average

lb/hr

see above
≤ 345 °F 4-HR Block Average

°F

see above
≤ 173 4-HR Block Average

klb/hr

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 01-Apr-2023

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	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	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		1		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		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 01-Apr-2023

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	3	3	3	2	3	3	3	2
2	2	2	2	2	2	2	2	3	3	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	3	3	2	3	3	3	3	3	3	3	3
5	2	3	3	3	2	3	2	2	2	3	2
6	3	IBC	7	IBC	2	3	3	2	2	3	3
7	2	2	2	2	3	3	3	3	3	3	2
8	3	3	3	3	3	2	3	3	3	2	3
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	3	3	2	2
12	2	2	2	2	3	3	3	3	3	3	2
13	2	2	2	2	3	3	2	2	2	3	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	3	2	2	2	2	3	3	2	2
20	2	2	2	2	2	2	3	3	2	2	2
21	3	3	2	2	2	2	2	2	2	2	2
22	2	2	2	2	2	2	2	3	3	2	2
23	3	3	3	3	3	3	3	3	3	3	3

Status Flags

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