



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



Date 6/13/23

Wheel Plant Wheelabrator North Andover
Unit 1 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.
6/13/2023	0	60	9.9		124		0		31		100		7			13		309		159.0	
6/13/2023	1	60	9.3		109		0		38		100		6			13		310		165.4	
6/13/2023	2	60	9.6		114		0		34		100		6			13		309		165.3	
6/13/2023	3	60	10.2		128		0		24		100		7	7		13		310	309	156.6	161.6
6/13/2023	4	60	10.1		129		0		22		100		8			12		310		156.4	
6/13/2023	5	60	9.7		120		0		34		100		7			13		310		163.1	
6/13/2023	6	60	10.0		120		0		39		100		8			13		309		161.9	
6/13/2023	7	60	9.8		116		0		43		100		8	8		13	13	309	309	164.1	161.4
6/13/2023	8	60	10.6		124		0		27		100		8			13		309		155.5	
6/13/2023	9	60	11.7		138		0		23		100		10			13		309		135.7	
6/13/2023	10	60	11.7		136		0		17		100		11			13		310		133.8	
6/13/2023	11	60	11.6		140		0		19		100		11	10		13		309	309	133.8	139.7
6/13/2023	12	60	11.5		139		0		13		100		10			13		309		133.4	
6/13/2023	13	60	11.5		136		0		13		100		9			13		309		135.1	
6/13/2023	14	60	11.6		138		0		13		100		10			12		310		134.0	
6/13/2023	15	60	11.4		140		1		30		98		9	10		13	13	309	309	134.2	134.2
6/13/2023	16	60	11.4		140		0		14		100		8			13		309		134.0	
6/13/2023	17	60	11.5		138		0		12		100		7			13		309		134.4	
6/13/2023	18	60	11.5		140		0		13		100		8			13		310		133.6	
6/13/2023	19	60	11.5		140		0		20		100		9	8		13		309	309	133.1	133.7
6/13/2023	20	60	11.4		139		0		21		100		8			13		309		133.6	
6/13/2023	21	60	11.3		138		0		16		100		8			12		309		133.8	
6/13/2023	22	60	11.4		140		0		25		100		7			14		309		133.8	
6/13/2023	23	60	11.4		140		0		34		100		8	8		13	13	309	309	134.0	133.8

Average: Geometric Mean Average:	132	0	OR	100	see above	see above	see above	see above
Limit:	≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		$\geq 80\%$ 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 6/13/23

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 Hr Block
6/13/2023	0	0	20.9	IF	8	IF	7	IF	-207	IBF	0	IBF	0	IF			0		86		0.0	
6/13/2023	1	0	20.9	IF	10	IF	6	IF	-202	IBF	0	IBF	0	IF			0		85		0.0	
6/13/2023	2	0	20.9	IF	8	IF	6	IF	-205	IBF	0	IBF	1	IF			0		84		0.0	
6/13/2023	3	5	20.1	ICF	8	ICF	5	ICF	-203	IBF	0	IBCF	1	ICF	1	ICF	0		83	85	0.0	0.0
6/13/2023	4	14	16.6	IBCF	92	IBCF	65	IBCF	-215	IBF	0	IBCF	481	IBCF			0		83		0.0	
6/13/2023	5	0	20.8	IF	8	IF	5	IF	187	IBCF	97	IBCF	0	IF			0		81		0.0	
6/13/2023	6	0	20.8	IF	9	IF	5	IF	-201	IBF	0	IBF	0	IF			0		79		0.0	
6/13/2023	7	0	20.8	IF	7	IF	5	IF	-199	IBF	0	IBF	1	IF	121	IBCF	0	0	78	80	0.0	0.0
6/13/2023	8	0	20.9	IF	7	IF	4	IF	-201	IBF	0	IBF	0	IF			0		78		0.0	
6/13/2023	9	0	20.9	IF	9	IF	5	IF	-199	IBF	0	IBF	0	IF			0		78		0.0	
6/13/2023	10	0	20.9	IF	9	IF	5	IF	-198	IBF	0	IBF	0	IF			0		78		0.0	
6/13/2023	11	0	20.9	IF	8	IF	4	IF	-200	IBF	0	IBF	0	IF	0	IF	0		78	78	0.0	0.0
6/13/2023	12	0	20.9	IF	7	IF	4	IF	-202	IBF	0	IBF	0	IF			0		79		0.0	
6/13/2023	13	0	20.9	IF	8	IF	3	IF	-204	IBF	0	IBF	0	IF			0		81		0.0	
6/13/2023	14	0	20.9	IF	9	IF	3	IF	-209	IBF	0	IBF	0	IF			0		82		0.0	
6/13/2023	15	0	20.9	IF	13	IF	3	IF	-207	IBF	0	IBF	3	IF	1	IF	0	0	82	81	0.0	0.0
6/13/2023	16	0	20.9	IF	16	IF	3	IF	-201	IBF	0	IBF	3	IF			0		82		1.1	
6/13/2023	17	0	20.9	IF	11	IF	3	IF	-199	IBF	0	IBF	2	IF			0		81		4.0	
6/13/2023	18	0	20.9	IF	8	IF	4	IF	-214	IBF	0	IBF	0	IF			0		81		4.6	
6/13/2023	19	0	20.8	IF	8	IF	6	IF	-221	IBF	0	IBF	1	IF	2	IF	0	0	80	81	4.9	3.6
6/13/2023	20	0	20.9	IF	10	IF	5	IF	-200	IBF	0	IBF	2	IF			0		79		4.9	
6/13/2023	21	0	20.9	IF	10	IF	6	IF	-202	IBF	0	IBF	1	IF			0		78		5.2	
6/13/2023	22	0	20.9	IF	7	IF	6	IF	-201	IBF	0	IBF	0	IF			0		77		5.6	
6/13/2023	23	0	20.9	IF	5	IF	7	IF	-208	IBF	0	IBF	0	IF	1	IF	0	0	76	77	5.9	5.4

Average:
Geometric Mean Average:

Limit:

12	IBCF
5	IBCF
≤ 150	≤ 29
24-HR Block Avg.	24-HR Geometric Mean

OR

0	IBCF
≥ 80%	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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 13-Jun-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	0	0	0	0	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	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	3	IC	5	IC	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0

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 13-Jun-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	3	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	3	BCF	23	BCF	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