



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



Date 7/2/23

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.
7/2/2023	0	60	9.6		131		0		66		100		4			13		309		166.7	
7/2/2023	1	60	9.7		128		4		82		95		7			12		310		167.3	
7/2/2023	2	60	9.7		135		3		74		96		5			12		310		167.8	
7/2/2023	3	60	9.7		134		0		47		100		4	5		13		309	309	167.7	167.4
7/2/2023	4	60	9.7		127		1		57		98		5			13		310		167.9	
7/2/2023	5	60	9.6		132		0		40		100		5			12		310		167.1	
7/2/2023	6	60	9.5		132		0		34		100		4			13		309		166.7	
7/2/2023	7	60	9.5		116		0		39		100		7	5		13	13	309	309	163.3	166.3
7/2/2023	8	60	9.6		112		0		41		100		3			13		309		162.5	
7/2/2023	9	60	9.4		129		0		57		99		3			13		310		167.3	
7/2/2023	10	60	9.4		131		0		57		100		3			13		309		167.3	
7/2/2023	11	60	9.9		123		0		50		100		19	7		12		310	309	161.4	164.6
7/2/2023	12	60	9.5		133		0		51		100		3			13		309		166.4	
7/2/2023	13	60	9.5		133		0		59		100		3			13		309		165.4	
7/2/2023	14	60	9.5		135		1		57		98		3			12		309		169.7	
7/2/2023	15	60	9.9		128		4		59		94		8	4		13	13	309	309	165.2	166.7
7/2/2023	16	60	9.8		125		0		43		100		4			13		310		164.5	
7/2/2023	17	60	9.8		120		0		45		100		4			13		309		164.6	
7/2/2023	18	60	9.8		134		0		52		100		3			13		310		167.0	
7/2/2023	19	60	9.7		130		0		50		100		4	4		13		308	309	166.8	165.7
7/2/2023	20	60	9.4		131		0		50		100		3			13		310		167.8	
7/2/2023	21	60	9.5		133		0		58		100		4			13		309		166.3	
7/2/2023	22	60	9.3		125		0		55		100		7			13		310		168.4	
7/2/2023	23	60	9.1		118		0		51		100		55	17		12	13	309	310	168.0	167.6

Average:
Geometric Mean Average:

Limit:

128	0
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

100
≥ 80% 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

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 7/2/23

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
7/2/2023	0	0	21.1	IF	21	IF	5	IF	-478	IBF	0	IBF	43	IF		0		260		1.6		
7/2/2023	1	0	21.2	IF	18	IF	4	IF	-404	IBF	0	IBF	23	IF		0		231		1.6		
7/2/2023	2	0	21.1	IF	19	IF	6	IF	-548	IBF	0	IBF	65	IF		0		207		0.0		
7/2/2023	3	5	20.4	ICF	15	ICF	4	ICF	-349	IBF	0	IBCF	7	ICF	35	ICF	0	171	217	0.0	0.8	
7/2/2023	4	12	17.5	IBCF	119	IBCF	73	IBCF	-330	IBF	0	IBCF	588	IBCF		0		168		0.0		
7/2/2023	5	0	21.2	IF	14	IF	7	IF	206	IBCF	97	IBCF	1	IF		0		146		0.0		
7/2/2023	6	0	21.2	IF	15	IF	6	IF	-307	IBF	0	IBF	1	IF		0		153		0.0		
7/2/2023	7	0	21.2	IF	14	IF	6	IF	-300	IBF	0	IBF	0	IF	148	IBCF	0	0	135	150	0.0	0.0
7/2/2023	8	0	21.2	IF	14	IF	6	IF	-290	IBF	0	IBF	0	IF		0		119		0.0		
7/2/2023	9	0	21.2	IF	14	IF	6	IF	-285	IBF	0	IBF	0	IF		0		110		0.0		
7/2/2023	10	0	21.2	IF	14	IF	6	IF	-282	IBF	0	IBF	0	IF		0		104		0.0		
7/2/2023	11	0	21.2	IF	14	IF	6	IF	-277	IBF	0	IBF	0	IF	0	IF	0	100	108	0.0	0.0	
7/2/2023	12	0	21.2	IF	15	IF	6	IF	-279	IBF	0	IBF	0	IF		0		98		0.0		
7/2/2023	13	0	21.2	IF	15	IF	5	IF	-274	IBF	0	IBF	0	IF		0		96		0.0		
7/2/2023	14	0	21.1	IF	16	IF	6	IF	-274	IBF	0	IBF	0	IF		0		95		0.0		
7/2/2023	15	0	21.1	IF	15	IF	5	IF	-271	IBF	0	IBF	0	IF	0	IF	0	0	95	96	0.0	0.0
7/2/2023	16	0	21.1	IF	15	IF	5	IF	-272	IBF	0	IBF	0	IF		0		92		0.0		
7/2/2023	17	0	21.1	IF	16	IF	4	IF	-279	IBF	0	IBF	0	IF		0		94		0.0		
7/2/2023	18	0	19.6	IF	287	IF	27	IF	62	IBF	57	IBF	274	IF		0		106		0.0		
7/2/2023	19	16	17.0	IF	165	IF	10	IF	21	IBF	54	IBF	75	IF	87	IF	8	133	107	4.3	1.1	
7/2/2023	20	60	15.4		140		6		14		57		19			12		153		7.7		
7/2/2023	21	60	11.9		80		5		9		43		7			16		197		24.5		
7/2/2023	22	60	10.8		102		37		58		36		161			2		258		79.8		
7/2/2023	23	60	11.4		137		8		70		88		8		49		26	14	304	228	166.0	69.5

Average: Geometric Mean Average:	115	10	OR	63	see above	see above	see above	see above			
Limit:	≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 80% Removal Efficiency	≤ 69 4-HR Block Average	ppmc	≥ 12 8-HR. Block Average	lb/hr	≤ 345 °F 4-HR Block Average	≤ 173 4-HR Block Average	klb/hr

Status Flags

- I - Invalid
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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 02-Jul-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	4	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 02-Jul-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	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
1	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
2	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
3	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
4	0		0		0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
5	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
6	2	BCF	22	BCF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	3
7	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
8	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
9	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
10	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
11	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
12	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
13	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
14	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
15	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
16	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
17	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
18	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
19	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	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