



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



Date 7/31/23

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
7/31/2023	0	0	20.8	IF	0	IF	4	IF	1969	IBF	100	IBF	9	IF		0		258		18.9		
7/31/2023	1	0	20.8	IF	0	IF	4	IF	440	IBF	99	IBF	5	IF		0		224		1.7		
7/31/2023	2	0	20.8	IF	0	IF	3	IF	445	IBF	99	IBF	2	IF		0		211		0.0		
7/31/2023	3	5	20.0	ICF	0	ICF	40	ICF	1733	IBF	98	IBCF	17	ICF	8	ICF	2	197	223	0.0	5.2	
7/31/2023	4	11	17.4	IBCF	65	IBCF	55	IBCF	-796	IBF	0	IBCF	551	IBCF		3		196		0.0		
7/31/2023	5	0	20.8	IF	1	IF	4	IF	157	IBCF	98	IBCF	0	IF		1		178		0.0		
7/31/2023	6	0	20.8	IF	0	IF	3	IF	-437	IBF	0	IBF	0	IF		1		164		0.0		
7/31/2023	7	0	20.8	IF	2	IF	3	IF	803	IBF	100	IBF	1	IF	138	IBCF	0	1	153	173	0.0	0.0
7/31/2023	8	0	20.8	IF	3	IF	3	IF	386	IBF	99	IBF	1	IF		0		146		0.0		
7/31/2023	9	0	20.8	IF	1	IF	3	IF	1062	IBF	100	IBF	0	IF		1		140		0.0		
7/31/2023	10	0	20.8	IF	2	IF	3	IF	779	IBF	100	IBF	1	IF		0		136		0.0		
7/31/2023	11	0	20.8	IF	3	IF	3	IF	768	IBF	100	IBF	1	IF	1	IF	0	136	139	0.0	0.0	
7/31/2023	12	0	20.8	IF	1	IF	4	IF	-6952	IBF	0	IBF	0	IF		0		133		0.0		
7/31/2023	13	0	20.8	IF	0	IF	4	IF	-1806	IBF	0	IBF	0	IF		0		127		0.0		
7/31/2023	14	0	20.8	IF	0	IF	4	IF	-940	IBF	0	IBF	0	IF		0		116		0.0		
7/31/2023	15	0	20.8	IF	0	IF	3	IF	-541	IBF	0	IBF	0	IF	0	IF	0	114	122	0.0	0.0	
7/31/2023	16	0	20.8	IF	0	IF	3	IF	-649	IBF	0	IBF	0	IF		0		112		0.0		
7/31/2023	17	0	20.8	IBMF	1	IBMF	1	IBMF	-951	IBF	0	IBMF	1	IBMF		0		110		0.0		
7/31/2023	18	36	13.9	IBCMF	13	IBCMF	12	IBCMF	-965	IBF	0	IBCMF	12	IBCMF		0		106		0.0		
7/31/2023	19	7	18.4	IBCMF	55	IBCMF	58	IBCMF	-813	IBF	0	IBCMF	748	IBCMF	190	IBCMF	0	105	106	0.0	0.0	
7/31/2023	20	0	20.7	IF	0	IF	4	IF	-481	IBF	0	IBF	0	IF		0		102		0.0		
7/31/2023	21	0	20.7	IF	0	IF	4	IF	-335	IBF	0	IBF	0	IF		0		99		0.0		
7/31/2023	22	0	20.6	IF	0	IF	4	IF	-261	IBF	0	IBF	0	IF		0		97		0.0		
7/31/2023	23	0	20.6	IF	0	IF	5	IF	-256	IBF	0	IBF	0	IF	0	IF	0	95	98	0.0	0.0	

Average: Geometric Mean Average:	6 IBCMF	5 IBCMF	0 IBCMF	OR	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	≥ 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 7/31/23

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.
7/31/2023	0	60	10.5		140		2		41		95		3			12		310		166.2	
7/31/2023	1	60	10.5		139		13		57		78		4			13		310		168.1	
7/31/2023	2	60	10.6		140		9		48		82		4			16		310		164.9	
7/31/2023	3	60	10.4		141		12		56		78		4	4		3		310	310	167.5	166.7
7/31/2023	4	60	10.7		139		17		62		73		6			20		310		165.6	
7/31/2023	5	60	10.5		141		18		58		69		5			16		310		166.6	
7/31/2023	6	60	10.4		140		9		42		79		5			9		310		164.5	
7/31/2023	7	60	10.5		140		5		30		83		6	5		17	13	310	310	164.5	165.3
7/31/2023	8	60	10.7		137		2		14		88		7			13		310		166.3	
7/31/2023	9	60	10.7		142		0		5		99		6			9		310		165.3	
7/31/2023	10	60	10.4		140		0		7		99		5			21		310		166.8	
7/31/2023	11	60	10.7		140		0		8		100		4	6		11		310	310	165.3	165.9
7/31/2023	12	60	10.3		140		0		5		100		4			18		310		166.5	
7/31/2023	13	60	10.3		139		0		9		100		4			18		310		166.3	
7/31/2023	14	60	10.0		140		0		9		100		5			16		310		167.5	
7/31/2023	15	60	10.0		139		0		13		100		6	5		23	16	310	310	166.4	166.7
7/31/2023	16	60	10.0		144		0		17		100		5			18		310		167.8	
7/31/2023	17	60	12.8	IBM	4	IBM	2	IBM	23		92	IBM	5	IBM		20		310		167.2	
7/31/2023	18	60	6.9	IBCMT	6	IBCMT	0	IBCMT	21		98	IBCMT	0	IBCMT		20		310		166.9	
7/31/2023	19	60	10.2		139		0		16		100		9			20		310	310	166.1	167.0
7/31/2023	20	60	10.4		139		0		21		100		5			18		309		166.2	
7/31/2023	21	60	10.5		141		2		25		90		4			13		310		167.6	
7/31/2023	22	60	10.4		140		1		26		95		6			13		310		166.3	
7/31/2023	23	60	10.4		139		1		27		97		4	5		12	17	310	310	166.8	166.7

Average: Geometric Mean Average:	140	1	OR	98	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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 31-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	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	IF	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	3	ICF	23	ICF	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		0		0		0		0		0		0
19	0		0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
20	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
21	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
22	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
23	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0

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Date 31-Jul-2023

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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	0	IBC	0	IBC	0	0	0	0	0	0	0
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

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