



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



Date 4/13/23

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.
4/13/2023	0	60	9.6		140		7		55		88		4			14		309		165.3	
4/13/2023	1	60	9.4		140		9		60		86		4			14		309		167.0	
4/13/2023	2	60	9.7		141		9		56		83		4			13		310		167.3	
4/13/2023	3	60	9.5		140		7		55		87		4	4		14		309	309	166.1	166.4
4/13/2023	4	60	9.5		142		14		71		81		4			14		309		166.2	
4/13/2023	5	60	9.7		139		15		71		78		4			14		309		165.7	
4/13/2023	6	60	9.5		140		7		51		86		5			14		310		166.4	
4/13/2023	7	60	9.4		139		4		47		91		4	4		14	14	309	309	166.7	166.3
4/13/2023	8	60	9.6		141		8		51		83		5			14		310		167.5	
4/13/2023	9	60	10.0		141		9		39		76		4			14		309		165.1	
4/13/2023	10	60	10.5		142		72		99		27		5			14		310		167.0	
4/13/2023	11	60	10.5		143		25		65		62		5	5		13		310	310	168.2	167.0
4/13/2023	12	60	11.2		138		33		91		64		4			14		309		166.9	
4/13/2023	13	60	11.0		146		39		88		56		6			14		308		166.1	
4/13/2023	14	60	10.4		136		27		120		77		6			11		311		164.7	
4/13/2023	15	60	10.3		143		20		74		73		4	5		9	13	309	310	166.8	166.1
4/13/2023	16	60	10.3		139		18		60		70		4			10		309		165.5	
4/13/2023	17	60	10.4		142		22		79		72		4			16		310		165.2	
4/13/2023	18	60	10.4		140		24		81		70		4			14		309		165.5	
4/13/2023	19	60	10.5		141		22		74		70		3	4		13		309	309	162.6	164.7
4/13/2023	20	60	10.5		142		21		70		70		3			13		309		165.4	
4/13/2023	21	60	10.5		144		24		74		67		3			14		309		167.7	
4/13/2023	22	60	10.5		142		21		65		67		3			14		309		164.3	
4/13/2023	23	60	10.3		143		21		55		63		3	3		13	13	309	309	166.1	165.9

Average: Geometric Mean Average:	141	16	OR	76	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	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
- 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 4/13/23

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
4/13/2023	0	60	10.7		140		1		50		98		2			13		310		165.8		
4/13/2023	1	60	10.6		138		1		51		99		2			14		310		166.7		
4/13/2023	2	60	12.1		143		1		48		99		47			14		311		153.8		
4/13/2023	3	5	19.8	ICF	348	ICF	11	ICF	80	IBF	86	IBCF	1737	ICF	17		14	235	310	18.1	162.1	
4/13/2023	4	12	17.3	IBCF	92	IBCF	59	IBCF	172	IBF	66	IBCF	571	IBCF		14		248		15.8		
4/13/2023	5	0	20.8	IF	7	IF	6	IF	163	IBCF	96	IBCF	6	IF		0		234		11.1		
4/13/2023	6	0	20.8	IF	5	IF	6	IF	182	IBF	97	IBF	4	IF		0		202		4.1		
4/13/2023	7	0	20.8	IF	4	IF	7	IF	186	IBF	96	IBF	6	IF	147	IBCF	0	13	170	214	0.0	7.8
4/13/2023	8	0	20.9	IF	4	IF	8	IF	190	IBF	96	IBF	3	IF		0		147		0.0		
4/13/2023	9	0	20.9	IF	5	IF	7	IF	195	IBF	96	IBF	2	IF		0		132		0.0		
4/13/2023	10	0	20.9	IF	5	IF	6	IF	202	IBF	97	IBF	1	IF		0		122		0.1		
4/13/2023	11	0	20.9	IF	5	IF	7	IF	207	IBF	96	IBF	1	IF	2	IF	0		119	130	0.4	0.1
4/13/2023	12	0	20.9	IF	5	IF	6	IF	212	IBF	97	IBF	0	IF		0		118		0.5		
4/13/2023	13	0	20.9	IF	6	IF	7	IF	215	IBMF	97	IBMF	1	IF		0		121		0.5		
4/13/2023	14	0	20.9	IF	6	IF	8	IF	226	IBF	96	IBF	0	IF		0		124		0.6		
4/13/2023	15	0	20.9	IF	6	IF	7	IF	232	IBF	97	IBF	0	IF	0	IF	0	0	125	122	0.6	0.5
4/13/2023	16	0	20.9	IF	4	IF	6	IF	242	IBF	97	IBF	0	IF		0		120		0.6		
4/13/2023	17	6	17.2	IF	110	IF	13	IF	64	IBF	80	IBF	78	IF		0		125		0.7		
4/13/2023	18	60	16.3		159		2		51		96		13			12		142		2.6		
4/13/2023	19	60	15.5		153		3		48		93		4		8		14	158	150	21.8	12.2	
4/13/2023	20	60	13.7		117		3		39		94		2			14		179		40.4		
4/13/2023	21	60	11.7		138		3		48		94		5			14		248		76.1		
4/13/2023	22	60	10.7		140		6		76		92		5			14		312		158.0		
4/13/2023	23	60	11.0		139		14		86		84		3		4		14	13	310	262	167.0	110.4

Average:
Geometric Mean Average:

Limit:

141	2
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

96
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

see above
≥ 12 8-HR. Block Average

see above
≤ 345 °F 4-HR Block Average

see above
≤ 173 4-HR Block Average

Status Flags

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



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