



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



Date 7/2/22

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.
7/2/2022	0	60	10.3		192		12		44		73		3			15		309		167.4	
7/2/2022	1	60	10.2		191		14		45		70		3			15		310		168.2	
7/2/2022	2	60	10.3		192		10		43		76		3			14		309		165.0	
7/2/2022	3	60	12.1		190		12		41		70		30	9		15		309	309	134.5	158.8
7/2/2022	4	60	9.5		173		12		57		79		6			15		310		158.7	
7/2/2022	5	60	9.8		186		14		50		73		4			14		309		164.0	
7/2/2022	6	60	9.7		188		14		54		74		3			14		309		164.7	
7/2/2022	7	60	9.4		190		17		58		71		3	4		14	14	309	309	168.3	163.9
7/2/2022	8	60	9.3		187		15		55		72		3			14		309		168.9	
7/2/2022	9	60	9.3		187		11		53		79		3			14		309		168.7	
7/2/2022	10	60	9.2		184		17		56		71		3			14		310		169.6	
7/2/2022	11	60	9.6		183		11		43		75		4	3		14		309	309	164.7	168.0
7/2/2022	12	60	9.5		184		10		44		78		4			14		310		165.0	
7/2/2022	13	60	9.7		185		7		38		82		3			14		309		164.4	
7/2/2022	14	60	9.9		185		13		44		70		3			15		309		165.1	
7/2/2022	15	60	9.9		187		11		37		71		3	3		14	14	309	309	167.6	165.5
7/2/2022	16	60	9.7		184		8		38		78		3			14		309		172.7	
7/2/2022	17	60	10.1		194		15		52		71		3			14		309		167.0	
7/2/2022	18	60	9.8		180		14		53		73		6			14		310		167.4	
7/2/2022	19	60	10.5		188		12		43		72		3	4		14		309	309	155.9	165.7
7/2/2022	20	60	10.0		191		16		43		63		3			14		310		165.7	
7/2/2022	21	60	9.8		189		15		42		64		3			14		309		165.9	
7/2/2022	22	60	9.7		188		17		40		58		3			14		310		166.2	
7/2/2022	23	60	9.8		189		21		51		60		3	3		14	14	309	309	166.8	166.2

Average: Geometric Mean Average:	187	13	OR	72	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 7/2/22

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.
7/2/2022	0	60	10.1		180		3		28		91		1		14		310		167.6		
7/2/2022	1	60	9.8		185		7		35		80		2		12		314		170.6		
7/2/2022	2	60	9.9		191		10		46		78		2		13		312		168.9		
7/2/2022	3	60	9.9		182		16		45		65		1	1	13		314	313	168.7	169.0	
7/2/2022	4	60	7.7		120		20		78		74		421		14		318		158.3		
7/2/2022	5	3	0.0	IF	0	IF	0	IF	92	IBCF	100	IBCF	0	IF	7		342		0.0		
7/2/2022	6	0	19.9	IF	445	IF	131	IF	124	IBF	0	IBF	7167	IF	0	13	243		6.8		
7/2/2022	7	0	20.0	IF	557	IF	251	IF	115	IBF	0	IBF	6527	IF	421		267	318	5.1	158.3	
7/2/2022	8	0	18.8	IF	412	IF	164	IF	143	IBF	0	IBF	4897	IF			296		4.8		
7/2/2022	9	0	19.4	IF	475	IF	289	IF	177	IBF	0	IBF	6895	IF			333		4.3		
7/2/2022	10	0	19.6	IF	540	IF	285	IF	184	IBF	0	IBF	6368	IF			332		3.4		
7/2/2022	11	0	19.9	IF	708	IF	182	IF	220	IBF	17	IBF	6465	IF	6156	IF	0	331	323	3.7	4.0
7/2/2022	12	0	20.3	IF	37	IF	9	IF	261	IBF	97	IBF	378	IF			317		1.4		
7/2/2022	13	0	20.7	IF	21	IF	5	IF	301	IBF	98	IBF	153	IF			277		0.3		
7/2/2022	14	0	20.9	IF	15	IF	5	IF	337	IBF	99	IBF	56	IF			237		0.3		
7/2/2022	15	0	20.9	IF	12	IF	5	IF	368	IBF	99	IBF	15	IF	151	IF	0	203	259	0.3	0.6
7/2/2022	16	0	20.9	IF	12	IF	5	IF	399	IBF	99	IBF	4	IF			185		0.3		
7/2/2022	17	0	20.9	IF	18	IF	4	IF	428	IBF	99	IBF	1	IF			168		0.3		
7/2/2022	18	0	20.9	IF	15	IF	5	IF	464	IBF	99	IBF	1	IF			149		0.2		
7/2/2022	19	0	21.0	IF	12	IF	4	IF	498	IBF	99	IBF	0	IF	2	IF	138	160	0.0	0.2	
7/2/2022	20	0	21.0	IF	11	IF	4	IF	546	IBF	99	IBF	0	IF			134		0.0		
7/2/2022	21	0	21.0	IF	11	IF	4	IF	583	IBF	99	IBF	0	IF			134		0.0		
7/2/2022	22	0	21.0	IF	10	IF	4	IF	633	IBF	99	IBF	0	IF			132		0.2		
7/2/2022	23	0	21.0	IF	10	IF	4	IF	685	IBF	99	IBF	0	IF	0	IF	0	130	133	0.0	0.1

Average:	172	9	79			
Geometric Mean Average:					see above	see above
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean	OR	≥ 75% Removal Efficiency	≤ 69 4-HR Block Average	ppmc
					see above	see above
					≤ 12 8-HR. Block Average	lb/hr
					≤ 345 4-HR Block Average	°F
					≤ 173 4-HR Block Average	klb/hr

Status Flags

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 02-Jul-2022

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	2	2	2	2	2	2	2	2	2	2	2
1	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2
3	2	2	2	2	2	2	2	2	2	2	2
4	2	2	2	2	2	2	2	2	2	2	2
5	2	2	2	2	2	2	2	2	2	2	2
6	2	IC	6	IC	2	2	2	2	2	2	3
7	2	2	2	2	2	2	2	2	2	2	2
8	2	2	2	2	2	2	2	2	2	2	2
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	2	2	2	2
12	2	2	2	2	2	2	2	2	2	2	2
13	2	2	2	2	2	2	2	2	2	2	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	2	2	2	2	2	2	2	2	2
20	2	2	2	2	2	2	2	2	2	2	2
21	2	2	2	2	2	2	2	2	2	2	2
22	2	2	2	2	2	2	2	2	2	2	2
23	2	2	2	2	2	2	2	2	2	2	2

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-2022

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		1		1		1		1		1		1		2		1		1		1
1	1		1		1		1		1		1		1		1		1		1		1
2	1		2		2		1		2		2		1		2		2		2		1
3	1		1		1		2		2		1		2		2		2		1		1
4	2		2		2		2		2		2		2		2		3		2		2
5	2	IF	2	IF	3	IF	4	IF	4	IF	4	IF	3	IF	3	IF	3	IF	4	IF	3
6	2	BCF	23	BCF	2	IF	2	IF	2	IF	1	IF	2	IF	1	IF	1	IF	1	IF	4
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	IF	1	IF	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	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
22	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
23	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1

Status Flags

I - Invalid C - Calibration F - Offline T - Out of Control ^ - Startup
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown