



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



Date 8/28/22

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.
8/28/2022	0	60	10.8		182		23		90		74		5			14		319		163.8	
8/28/2022	1	60	10.4		176		14		76		81		5			14		305		166.1	
8/28/2022	2	60	10.6		188		19		65		70		5			14		308		165.4	
8/28/2022	3	60	10.5		184		19		58		67		5	5		14		313	311	166.1	165.4
8/28/2022	4	60	10.5		192		21		77		72		4			13		312		164.1	
8/28/2022	5	60	10.4		177		14		73		80		5			14		305		166.1	
8/28/2022	6	60	10.5		173		15		78		81		5			13		300		166.6	
8/28/2022	7	60	10.7		186		20		73		73		4	5		14	14	300	305	165.6	165.6
8/28/2022	8	60	10.7		180		24		85		72		4			13		306		164.6	
8/28/2022	9	60	10.7		183		22		76		71		4			16		312		166.2	
8/28/2022	10	60	10.6		195		18		74		76		4			9		311		167.2	
8/28/2022	11	60	10.6		195		11		60		82		4	4		28		306	309	165.8	165.9
8/28/2022	12	60	10.6		183		7		75		90		5			21		301		165.2	
8/28/2022	13	60	10.5		195		16		77		79		4			16		306		167.0	
8/28/2022	14	60	10.6		193		6		54		88		4			14		305		166.4	
8/28/2022	15	60	10.5		191		19		91		79		4	4		14	17	308	305	167.7	166.6
8/28/2022	16	60	10.6		193		17		80		78		4			14		311		164.2	
8/28/2022	17	60	10.6		193		16		67		76		4			14		313		168.1	
8/28/2022	18	60	10.5		182		8		54		85		4			14		311		166.7	
8/28/2022	19	60	10.8		193		7		57		87		3	4		14		307	311	166.8	166.4
8/28/2022	20	60	10.9		198		6		53		89		3			14		299		164.6	
8/28/2022	21	55	13.1		212		13		46		72		127			14		304		133.1	
8/28/2022	22	18	18.5	IF	512	IF	43	IF	51	IBF	16	IBF	1760	IF		14		288		81.6	
8/28/2022	23	0	20.9	IF	63	IF	8	IF	-279	IBF	0	IBF	14	IF	65	0	14	248	302	20.7	148.9

Average:
Geometric Mean Average:

Limit:

188	14
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

80
≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

see above
≥ 12 lb/hr 8-HR. Block Average

see above
≤ 345 °F 4-HR Block Average

see above
≤ 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 8/28/22

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.
8/28/2022	0	60	10.8		172		24		86		72		4			14		314		166.6	
8/28/2022	1	60	10.9		179		22		62		65		3			14		314		168.3	
8/28/2022	2	60	10.7		176		18		55		68		4			11		311		168.0	
8/28/2022	3	60	10.8		175		19		56		66		4	4		12		310	312	166.1	167.3
8/28/2022	4	60	11.0		168		24		83		71		4			16		311		167.3	
8/28/2022	5	60	10.6		164		22		67		67		2			19		310		166.2	
8/28/2022	6	60	10.6		172		20		48		58		3			17		314		167.4	
8/28/2022	7	60	10.7		168		20		68		71		3	3		16	15	310	311	166.3	166.8
8/28/2022	8	60	11.0		168		17		74		77		2			13		298		166.5	
8/28/2022	9	60	10.8		168		21		65		68		3			13		307		167.1	
8/28/2022	10	60	10.6		174		16		57		71		2			15		311		167.3	
8/28/2022	11	60	10.8		165		15		55		73		1	2		14		310	307	166.9	166.9
8/28/2022	12	60	10.6		164		11		51		78		1			14		310		166.7	
8/28/2022	13	60	10.7		166		14		55		75		1			14		313		167.0	
8/28/2022	14	60	10.6		161		8		43		82		2			14		314		166.7	
8/28/2022	15	60	10.7		156		9		49		82		2	2		14	14	309	312	166.5	166.7
8/28/2022	16	60	10.7		166		13		43		70		2			14		319		168.8	
8/28/2022	17	60	11.0		162		18		56		68		2			14		317		167.8	
8/28/2022	18	60	10.9		166		15		56		73		2			14		315		168.9	
8/28/2022	19	60	10.6		169		8		55		85		62	17		14		306	314	170.2	168.9
8/28/2022	20	60	11.1		158		8		44		82		2			14		304		165.5	
8/28/2022	21	60	11.1		165		12		49		75		3			14		308		167.4	
8/28/2022	22	60	11.3		167		16		54		71		3			14		308		164.1	
8/28/2022	23	60	11.3		169		18		56		69		3	3		14	14	314	308	164.9	165.5

Average: Geometric Mean Average:	167	15	OR	73	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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 28-Aug-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	1		1		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	1
3	1		1		1		1		1		1		1		1		1		1		1	1
4	1		1		1		1		1		1		1		1		1		1		1	1
5	1		1		1		1		1		1		1		1		1		1		1	1
6	3	IC	5	IC	1		1		1		1		1		1		1		1		1	1
7	1		1		1		1		1		1		1		1		1		1		1	1
8	1		1		1		1		1		1		1		1		1		1		1	1
9	1		1		1		1		1		1		1		1		1		1		1	1
10	1		1		1		1		1		1		1		1		1		1		1	1
11	1		1		1		1		1		1		1		1		1		1		1	1
12	1		1		1		1		1		1		1		1		1		1		1	1
13	1		1		1		1		1		1		1		1		1		1		1	1
14	1		1		1		1		1		1		1		1		1		1		1	1
15	1		1		1		1		1		1		1		1		1		1		1	1
16	1		1		1		1		1		1		1		1		1		1		1	1
17	1		1		1		1		1		1		1		1		1		1		1	1
18	1		1		1		1		1		1		1		1		1		1		1	1
19	1		1		1		1		1		1		1		1		1		1		1	1
20	1		1		1		1		1		1		1		1		1		1		1	1
21	1		1		1		1		1		1		1		1	IF	1	IF	1		1	1
22	1		1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	1
23	1	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	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 28-Aug-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	2	2	2	2	2	2	2	2	2	2
1	2	2	2	2	2	2	2	2	2	2	2
2	3	2	2	2	2	2	2	2	3	2	2
3	3	2	2	2	2	2	2	2	2	2	2
4	2	2	2	3	3	3	3	3	3	3	2
5	3	3	3	3	3	3	3	3	3	3	3
6	2	IBC	6	IBC	3	2	2	2	3	2	3
7	2	3	3	2	3	3	3	2	2	3	3
8	3	2	2	2	2	2	2	3	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	3	2	2	2	2	2	3	3	2	2
12	3	3	3	3	3	3	3	3	3	3	3
13	2	3	2	2	2	2	2	2	2	2	2
14	2	2	2	3	3	2	2	2	2	2	2
15	2	2	2	2	2	2	2	3	2	2	2
16	2	2	3	2	2	2	2	2	2	2	2
17	1	1	1	1	1	1	1	1	1	1	1
18	1	1	1	1	1	2	2	2	2	2	1
19	2	3	2	2	2	2	2	2	3	2	2
20	3	3	3	3	3	3	3	3	3	3	3
21	2	3	3	3	3	3	3	3	3	3	3
22	3	3	2	2	3	3	3	2	2	3	2
23	3	2	2	3	3	3	2	3	3	3	3

Status Flags

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