



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



Date 6/14/22

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.
6/14/2022	0	0	20.9	IF	52	IF	7	IF	91	IBF	92	IBF	1	IF		0		130		0.0	
6/14/2022	1	24	17.7	IF	416	IF	585	IF	6	IBF	0	IBF	3624	IF		11		171		0.2	
6/14/2022	2	60	17.3		392		466		6		0		5536			16		198		1.4	
6/14/2022	3	60	15.4		297		48		3		0		1148		3342	17		238	218	19.7	10.5
6/14/2022	4	60	13.5		251		9		2		0		1			16		272		43.2	
6/14/2022	5	60	13.1		234		9		4		0		0			16		277		56.5	
6/14/2022	6	60	13.9		264		10		2		0		0			15		264		56.5	
6/14/2022	7	60	12.9		239		9		3		0		0	0		17	16	258	268	55.2	52.8
6/14/2022	8	60	11.8		221		19		21		7		0			15		263		64.5	
6/14/2022	9	60	8.4		154		24		93		74		99			17		304		147.7	
6/14/2022	10	60	9.1		190		84		192		56		5			16		304		162.1	
6/14/2022	11	60	9.1		185		15		74		79		3	27		17		304	294	164.0	134.6
6/14/2022	12	60	9.2		184		13		48	IBM	73	IBM	2			15		305		163.7	
6/14/2022	13	60	9.4		189		14		46		70		2			16		305		165.9	
6/14/2022	14	60	9.5		189		17		89		81		3			15		304		166.0	
6/14/2022	15	60	9.1		170		14		117		88		5	3		16	16	305	305	164.6	165.1
6/14/2022	16	60	9.1		156		7		70		90		4			15		304		166.1	
6/14/2022	17	60	9.8		179		19		98		81		4			15		304		163.6	
6/14/2022	18	60	9.9		190		34		149		77		3			15		305		164.7	
6/14/2022	19	60	10.0		192		30		129		77		3	4		16		305	304	166.5	165.2
6/14/2022	20	60	10.1		182		22		111		80		5			15		304		164.1	
6/14/2022	21	60	9.8		179		22		121		82		9			15		304		165.3	
6/14/2022	22	60	9.8		181		19		94		80		3			14		305		166.1	
6/14/2022	23	60	9.7		158		13		100		87		3	5		14	15	304	304	165.5	165.2

Average: Geometric Mean Average:	208	20	OR	39	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 6/14/22

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.
6/14/2022	0	60	10.4		198		20		25		21		2			14		314		165.4	
6/14/2022	1	60	10.5		197		28		28		1		2			14		316		166.5	
6/14/2022	2	60	10.5		200		22		27		18		3			14		317		164.5	
6/14/2022	3	60	10.6		194		25		43		43		2	2		14		309	314	164.7	165.3
6/14/2022	4	60	10.3		191		14		29		52		2			14		303		166.5	
6/14/2022	5	60	10.4		198		17		28		38		2			15		300		165.1	
6/14/2022	6	60	10.3		196		12		16		30		2			14		303		165.4	
6/14/2022	7	60	10.2		196		12		12		0		2	2		14	14	305	303	165.5	165.6
6/14/2022	8	60	10.3		191		9		8		0		2			15		306		166.7	
6/14/2022	9	60	9.9		184		3		15		79		7			14		292		164.3	
6/14/2022	10	60	10.1		197		30		88		65		3			14		294		165.7	
6/14/2022	11	60	10.3		195		18		34		47		2	3		14		300	298	165.3	165.5
6/14/2022	12	60	10.0		195		8		6	IBM	0	IBM	2			14		301		165.3	
6/14/2022	13	60	10.3		196		16		26		38		1			14		303		166.4	
6/14/2022	14	60	10.0		199		23		23		0		1			14		306		166.5	
6/14/2022	15	60	10.4		198		22		20		0		3	2		14	14	317	307	161.7	165.0
6/14/2022	16	60	10.2		195		16		10		0		3			14		317		164.8	
6/14/2022	17	60	10.1		198		41		47		11		3			14		318		166.4	
6/14/2022	18	60	10.2		197		30		45		32		3			14		316		165.0	
6/14/2022	19	60	10.1		198		43		52		17		3	3		14		316	317	165.6	165.5
6/14/2022	20	60	10.2		197		16		26		38		2			14		307		165.9	
6/14/2022	21	60	10.2		198		20		26		21		2			14		303		165.7	
6/14/2022	22	60	10.2		194		30		36		16		2			14		315		166.9	
6/14/2022	23	60	10.3		198		24		30		18		2	2		14	14	313	310	164.7	165.8

Average:
Geometric Mean Average:

Limit:

196	18
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

27
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 14-Jun-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	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
1	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	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		2		2		2
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 14-Jun-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	1	0	1	1	1	0	1	1	0	0	0
1	1	1	1	1	1	1	1	1	0	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	IBC	5	IBC	1	1	1	1	1	1	1
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	0	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	0	0	0	1	1	1	1	1	1	1	0
22	1	1	0	0	1	0	1	1	1	0	0
23	1	1	1	1	0	1	1	1	0	1	0

Status Flags

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