



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



Date 6/16/22

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.
6/16/2022	0	60	9.7		198		18		48		62		2			13		304		168.1	
6/16/2022	1	60	9.8		197		15		58		73		2			13		304		165.1	
6/16/2022	2	60	9.9		195		11		36		70		2			14		304		163.4	
6/16/2022	3	60	9.8		197		19		51		62		2	2		14		304	304	164.4	165.2
6/16/2022	4	60	9.9		193		9		53		83		2			13		304		166.5	
6/16/2022	5	60	9.6		196		6		19		68		3			14		305		165.7	
6/16/2022	6	60	9.7		192		9		19		56		3			13		304		166.8	
6/16/2022	7	60	9.5		165		2		22		89		3	3		13	13	304	304	167.9	166.7
6/16/2022	8	60	9.5		170		0		19		98		4			13		305		167.5	
6/16/2022	9	60	9.5		173		1		26		95		4			13		304		168.6	
6/16/2022	10	60	10.1		195		3		21		85		2			13		304		165.5	
6/16/2022	11	60	10.4		191		40		127		69		3	3		13		305	304	156.4	164.5
6/16/2022	12	60	10.1		192		22		69		68		2			13		304		164.0	
6/16/2022	13	60	10.2		198		21		82		74		2			14		304		163.7	
6/16/2022	14	60	10.1		197		26		85		70		2			13		304		164.2	
6/16/2022	15	60	9.8		168		2		35		94		3	2		14	13	304	304	163.6	163.9
6/16/2022	16	60	10.0		189		8		40		81		2			13		305		163.3	
6/16/2022	17	60	10.0		201		14		46		69		1			13		304		166.9	
6/16/2022	18	60	10.1		196		20		65		70		2			13		304		165.5	
6/16/2022	19	60	10.1		197		13		43		70		2	2		13		304	304	165.3	165.3
6/16/2022	20	60	9.9		199		21		58		64		2			13		304		166.4	
6/16/2022	21	60	9.9		197		22		60		63		2			14		304		164.3	
6/16/2022	22	60	9.9		197		19		69		72		2			14		305		164.2	
6/16/2022	23	60	9.9		185		7		52		88		3	2		13	13	304	304	161.6	164.1

Average:
Geometric Mean Average:

Limit:

191	9
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

79
≥ 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 6/16/22

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.
6/16/2022	0	60	10.4		179		3		8		66		1			13		310		166.5	
6/16/2022	1	60	10.6		189		17		22		20		2			14		311		167.7	
6/16/2022	2	60	10.7		187		17		20		18		2			13		309		165.3	
6/16/2022	3	60	10.7		167		12		21		42		2	2		13		307	309	165.4	166.2
6/16/2022	4	60	10.5		181		12		19		35		5			13		304		166.8	
6/16/2022	5	60	10.5		177		6		13		57		3			14		311		166.2	
6/16/2022	6	60	10.1		169		6		15		58		3			14		310		165.3	
6/16/2022	7	60	10.5		181		3		8		67		3	3		14	14	308	308	163.6	165.5
6/16/2022	8	60	10.5		155		3		8		59		3			14		313		163.1	
6/16/2022	9	60	10.1		151		4		12		63		3			14		318		166.5	
6/16/2022	10	60	10.4		164		0		7		94		2			14		318		166.0	
6/16/2022	11	60	10.4		152		5		37		88		3	3		14		312	315	163.5	164.8
6/16/2022	12	60	10.4		148		9		23		59		2			14		300		166.0	
6/16/2022	13	60	10.3		155		18		23		21		3			13		317		165.3	
6/16/2022	14	60	10.4		174		5		9		46		3			14		312		165.6	
6/16/2022	15	60	10.4		187		6		18		65		2	2		14	14	306	309	163.7	165.1
6/16/2022	16	60	10.2		184		13		16		18		2			14		310		165.9	
6/16/2022	17	60	10.0		183		5		9		46		2			14		309		166.5	
6/16/2022	18	60	9.9		175		2		6		59		3			14		304		165.5	
6/16/2022	19	60	10.2		171		2		4		55		1	2		14		304	307	166.3	166.0
6/16/2022	20	60	10.3		187		11		13		14		2			14		303		165.2	
6/16/2022	21	60	10.0		199		20		19		0		3			13		316		167.0	
6/16/2022	22	60	10.0		196		28		24		0		3			14		315		167.2	
6/16/2022	23	60	10.1		195		11		10		0		3	3		14	14	313	312	165.6	166.3

Average: Geometric Mean Average:	175	7	51	OR	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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 16-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	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 16-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	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0
2	1	0	0	0	0	0	0	0	0	0	0
3	1	0	0	1	1	1	1	0	0	1	0
4	1	1	1	0	1	1	1	1	1	1	0
5	0	0	0	1	1	1	1	1	1	1	0
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	1	1	1	1	1	1	1	1
12	1	0	0	1	0	0	0	0	0	0	0
13	1	1	1	1	0	0	1	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	1	1	1	1	1	1	1	0	0	1	1
19	0	0	0	0	0	0	0	1	1	0	0
20	0	0	0	0	0	0	0	0	0	0	0
21	0	1	1	1	1	1	1	1	1	1	0
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