



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



Date 3/19/22

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.
3/19/2022	0	60	10.0		181		15		66		77		4			14		304		165.0	
3/19/2022	1	60	10.1		183		13		62		79		4			13		305		163.2	
3/19/2022	2	60	10.1		187		17		70		75		3			14		304		167.3	
3/19/2022	3	60	10.2		188		20		68		70		3	4		13		304	304	166.4	165.5
3/19/2022	4	60	10.0		189		18		65		72		6			14		304		166.5	
3/19/2022	5	60	10.2		186		19		67		71		4			14		305		165.6	
3/19/2022	6	60	10.2		189		16		58		73		5			13		304		165.5	
3/19/2022	7	60	10.0		188		14		64		78		5	5		14	14	304	304	166.5	166.0
3/19/2022	8	60	10.0		166		7		62		88		5			13		304		167.0	
3/19/2022	9	60	10.3		190		21		84		75		5			13		304		165.0	
3/19/2022	10	60	10.3		187		29		104		72		5			12		304		164.0	
3/19/2022	11	60	10.2		192		21		80		74		5	5		13		304	304	165.7	165.4
3/19/2022	12	60	10.2		191		34		117		71		6			13		304		164.8	
3/19/2022	13	60	10.1		190		22		77		72		5			13		304		166.1	
3/19/2022	14	60	10.1		187		18		76		76		5			13		305		165.2	
3/19/2022	15	60	10.1		191		25		90		73		5	5		13	13	304	304	167.6	165.9
3/19/2022	16	60	10.2		178		22		86		74		5			13		304		163.8	
3/19/2022	17	60	10.1		186		38		138		73		5			13		304		167.2	
3/19/2022	18	60	10.2		177		22		79		72		4			13		305		165.5	
3/19/2022	19	60	10.3		193		26		100		74		6	5		13		304	304	163.2	164.9
3/19/2022	20	60	10.1		190		21		80		74		4			13		304		165.8	
3/19/2022	21	60	9.9		186		20		68		71		5			13		305		165.2	
3/19/2022	22	60	10.0		189		20		66		70		5			13		304		164.8	
3/19/2022	23	60	9.9		191		14		64		79		5	5		14	13	304	304	165.0	165.2

Average:
Geometric Mean Average:

Limit:

186	19
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

75
≥ 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 3/19/22

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.
3/19/2022	0	60	9.4		195		0		69		100		2			14		303		166.1	
3/19/2022	1	60	9.5		193		0		75		100		2			13		301		165.7	
3/19/2022	2	60	9.5		192		1		110		99		2			13		300		166.5	
3/19/2022	3	60	9.4		190		0		84		99		2	2		15		312	304	167.4	166.4
3/19/2022	4	60	9.4		184		2		61		98		3			15		310		166.2	
3/19/2022	5	60	9.3		192		1		55		98		2			15		312		167.5	
3/19/2022	6	60	9.5		195		2		57		97		2			15		306		165.7	
3/19/2022	7	60	9.4		198		5		70		93		2	2		15	14	309	309	165.8	166.3
3/19/2022	8	60	9.5		195		5		71		93		2			16		304		165.7	
3/19/2022	9	60	9.7		192		16		98		84		2			16		304		164.3	
3/19/2022	10	60	9.6		196		27		108		75		2			16		305		165.0	
3/19/2022	11	60	9.4		190		16		75		78		3	3		17		307	305	165.9	165.2
3/19/2022	12	60	9.7		194		11		63		83		2			18		305		164.5	
3/19/2022	13	60	9.5		194		12		78		85		2			17		300		165.8	
3/19/2022	14	60	9.5		192		15		79		81		2			16		303		165.9	
3/19/2022	15	60	9.6		193		17		70		75		2	2		16	16	305	303	165.0	165.3
3/19/2022	16	60	9.6		189		20		85		76		3			16		306		166.7	
3/19/2022	17	60	9.5		192		21		74		71		2			16		309		165.1	
3/19/2022	18	60	9.8		184		20		59		66		3			16		316		166.2	
3/19/2022	19	60	9.7		187		11		82		86		2	3		16		295	306	163.8	165.4
3/19/2022	20	60	9.6		185		0		61		100		2			16		303		166.4	
3/19/2022	21	60	9.4		195		0		44		100		2			16		314		165.9	
3/19/2022	22	60	9.4		193		0		38		100		2			14		305		165.4	
3/19/2022	23	60	9.4		196		0		46		100		2	2		15	16	302	306	165.4	165.8

Average: Geometric Mean Average:	192	2	OR	97	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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 19-Mar-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	1	2	2	1	2	2	2	1
2	2	2	2	2	2	1	2	2	2	1	1
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
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 19-Mar-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	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	IBC	6	IBC	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