



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



Date 3/18/22

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.
3/18/2022	0	60	10.0		162		21		65		68		5			13		304		166.7	
3/18/2022	1	60	10.0		171		20		54		64		5			14		304		164.8	
3/18/2022	2	60	10.0		165		18		63		72		6			13		304		164.7	
3/18/2022	3	60	9.9		167		21		71		71		6	5		14		305	304	168.9	166.3
3/18/2022	4	60	9.9		168		22		70		68		6			14		304		169.1	
3/18/2022	5	60	10.0		171		17		41		59		5			13		304		167.1	
3/18/2022	6	60	9.8		172		22		53		59		5			13		304		167.1	
3/18/2022	7	60	9.7		163		12		48		76		5	5		13	13	305	304	165.7	167.2
3/18/2022	8	60	9.7		165		3		38		91		5			13		305		167.2	
3/18/2022	9	60	10.3		157		4		49		92		5			14		304		163.3	
3/18/2022	10	60	10.2		170		3		46		93		5			12		305		164.9	
3/18/2022	11	60	10.1		167		14		83		83		5	5		14		305	304	165.0	165.1
3/18/2022	12	60	10.2		161		15		77		80		5			14		304		164.2	
3/18/2022	13	60	10.0		159		7		61		89		5			14		305		166.4	
3/18/2022	14	60	10.1		161		9		65		85		6			14		304		166.8	
3/18/2022	15	60	10.1		163		13		71		82		5	5		14	14	304	304	165.2	165.7
3/18/2022	16	60	10.2		154		5		60		91		6			13		304		163.8	
3/18/2022	17	60	10.2		194		12		66		82		4			14		305		164.9	
3/18/2022	18	60	10.2		193		14		62		78		4			14		304		165.1	
3/18/2022	19	60	10.1		194		18		68		74		4	4		15		304	304	165.3	164.8
3/18/2022	20	60	10.0		192		12		60		80		4			14		305		166.0	
3/18/2022	21	60	10.0		192		12		58		80		4			13		304		166.5	
3/18/2022	22	60	10.0		191		18		77		77		4			13		304		166.4	
3/18/2022	23	60	9.8		187		10		68		85		4	4		14	14	304	304	167.4	166.6

Average:
Geometric Mean Average:

Limit:

173	12
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

81
≥ 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 3/18/22

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.
3/18/2022	0	60	10.3		193		4		79		95		9			14		300		165.6	
3/18/2022	1	60	10.1		193		5		68		93		2			14		300		166.5	
3/18/2022	2	60	10.4		192		6		49		89		2			14		300		166.3	
3/18/2022	3	60	10.5		195		5		57		90		3	4		14		300	300	166.6	166.3
3/18/2022	4	60	9.1		201		13	IBCT	47		72	IBCT	10			14		300		167.3	
3/18/2022	5	60	9.2		199		0	IT	30		100	IBCT	6			14		302		166.6	
3/18/2022	6	60	9.0		195		0	IT	39		100	IBT	6			14		309		166.3	
3/18/2022	7	60	8.9		201		0	IT	31		100	IBT	6	7		14	14	305	304	166.5	166.7
3/18/2022	8	60	8.9		199		0	IBCMT	25		100	IBCMT	5			14		300		167.3	
3/18/2022	9	60	5.1	IBCM	73	IBCM	47	IBCMT	58	IBM	18	IBCMT	289	IBCMT		14		300		166.4	
3/18/2022	10	60	9.2		180		2		27	IBM	91	IBCMT	9			14		300		166.8	
3/18/2022	11	60	9.2		190		1		57	IBM	98	IBM	2	5		14		300	300	165.6	166.5
3/18/2022	12	60	9.2		182		1		60	IBM	98	IBM	3			13		300		166.8	
3/18/2022	13	60	9.2		185		1		58		98		3			14		300		166.7	
3/18/2022	14	60	9.3		186		1		79		99		2			13		304		167.0	
3/18/2022	15	60	9.3		197		1		44		99		3	3		12	13	307	303	165.9	166.6
3/18/2022	16	60	9.3		193		1		62		99		3			12		308		166.8	
3/18/2022	17	60	9.4		189		1		50		99		2			10		306		166.6	
3/18/2022	18	60	9.4		192		1		45		99		2			11		304		166.7	
3/18/2022	19	60	9.4		194		1		41		99		2	2		14		307	306	167.1	166.8
3/18/2022	20	60	9.5		189		1		54		99		2			14		304		166.5	
3/18/2022	21	60	9.6		194		0		49		99		2			15		295		165.1	
3/18/2022	22	60	9.5		194		0		61		100		2			15		295		166.9	
3/18/2022	23	60	9.4		195		0		67		100		2	2		16	13	306	300	166.2	166.2

Average:
Geometric Mean Average:

Limit:

193	1
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

98
≥ 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 18-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	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	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	1	1	1	1	1	1	1	1	1	1	1
19	1	2	1	2	2	1	2	2	2	1	1
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 18-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