



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



Date 3/4/22

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.
3/4/2022	0	60	10.3		198		13		23		44		5			14		309		165.9	
3/4/2022	1	60	10.2		198		6		26		76		4			15		310		165.0	
3/4/2022	2	60	10.1		199		7		26		73		5			15		309		165.1	
3/4/2022	3	60	10.2		199		16		41		62		15	7		15		309	309	165.6	165.4
3/4/2022	4	60	10.1		195		10		28		64		3			15		310		165.3	
3/4/2022	5	60	10.1		201		8		28		72		3			15		309		167.5	
3/4/2022	6	60	10.2		197		8		22		65		2			15		309		165.6	
3/4/2022	7	60	10.2		198		15		36		59		3	3		14	14	310	309	164.8	165.8
3/4/2022	8	60	10.4		198		19		37		49		3			14		309		165.9	
3/4/2022	9	60	10.4		198		24		50		51		4			14		310		166.3	
3/4/2022	10	60	10.3		200		16		46	IBM	65	IBM	5			14		310		165.5	
3/4/2022	11	60	10.2		199		21		74		71		4	4		14		309	309	165.5	165.8
3/4/2022	12	60	10.0		198		13		62		79		3			14		309		166.6	
3/4/2022	13	60	10.1		188		4		39		90		3			15		309		165.9	
3/4/2022	14	60	10.3		179		1		34		97		3			14		309		161.8	
3/4/2022	15	60	10.2		199		5		48		89		4	3		14	14	310	309	166.3	165.1
3/4/2022	16	60	10.5		199		16		68		77		2			15		309		166.6	
3/4/2022	17	60	10.5		198		16		75		79		2			14		309		166.0	
3/4/2022	18	60	10.5		198		10		54		81		2			14		310		165.0	
3/4/2022	19	60	10.3		198		11		54		80		3	2		14		310	309	167.0	166.2
3/4/2022	20	60	10.2		199		17		76		78		4			13		309		167.0	
3/4/2022	21	60	10.0		198		8		54		85		4			15		309		165.2	
3/4/2022	22	60	10.0		199		6		47		87		4			15		310		165.5	
3/4/2022	23	60	10.1		199		10		51		81		4	4		14	14	309	309	165.6	165.8

Average:
Geometric Mean Average:

Limit:

197	10
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

77
≥ 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



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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.
3/4/2022	0	60	9.5		177		11		3		0		1			13		310		166.5	
3/4/2022	1	60	9.5		188		5		6		11		1			14		311		166.6	
3/4/2022	2	60	9.4		190		7		9		18		1			14		315		166.6	
3/4/2022	3	60	9.4		179		11		13		12		1	I		14		315	313	166.0	166.4
3/4/2022	4	60	9.4		182		3		18		86		2			14		305		167.3	
3/4/2022	5	60	9.1		186		3		18		83		6			13		300		167.0	
3/4/2022	6	60	9.3		176		2		9		75		3			14		301		165.9	
3/4/2022	7	60	9.3		188		2		14		88		4	I		14	14	302	302	166.7	166.7
3/4/2022	8	60	9.3		185		14		22		39		3			14		304		166.6	
3/4/2022	9	60	9.6		191		25		78		68		4			14		309		166.5	
3/4/2022	10	60	9.5		190		16		24	IBM	33	IBM	3			14		307		165.6	
3/4/2022	11	60	9.8		179		6		10		38		2	I		14		308	307	164.5	165.8
3/4/2022	12	60	9.3		193		2		12		85		3			13		306		166.8	
3/4/2022	13	60	9.4		183		4		15		72		2			14		305		166.4	
3/4/2022	14	60	9.2		192		0		5		100		2			14		308		166.0	
3/4/2022	15	60	9.1		190		0		11		100		3	I		14	14	306	306	165.6	166.2
3/4/2022	16	60	9.4		191		4		27		85		2			14		305		166.7	
3/4/2022	17	60	9.4		190		3		24		88		2			14		305		166.7	
3/4/2022	18	60	9.3		187		1		16		95		2			14		305		166.9	
3/4/2022	19	60	9.3		196		18		54		66		3	I		14		305	305	167.2	166.8
3/4/2022	20	60	9.3		192		16		40		59		3			14		305		166.6	
3/4/2022	21	60	9.3		195		4		21		83		4			14		305		166.2	
3/4/2022	22	60	9.3		192		4		27		85		3			14		305		166.8	
3/4/2022	23	60	9.3		194		6		26		77		3	I		14	14	305	305	167.0	166.7

Average:
Geometric Mean Average:

Limit:

188	4
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

82
≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 04-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	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1
3	1	1	1	2	2	2	2	2	2	2	1
4	2	2	2	2	2	1	2	2	2	1	1
5	2	2	2	2	1	2	1	2	1	2	1
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	1	2	2	2	1	2	2	2	1
11	2	1	2	2	2	2	1	2	2	2	1
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	1	1	2	1
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 04-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