



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



Date 3/3/22

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.
3/3/2022	0	60	10.1		196		15		44		67		4			13		309		161.4	
3/3/2022	1	60	10.2		197		39		60		35		3			14		309		166.7	
3/3/2022	2	60	10.2		198		21		44		51		4			14		310		165.9	
3/3/2022	3	60	10.2		199		26		43		40		3	4		14		309	309	164.7	164.7
3/3/2022	4	60	10.0		200		21		53		60		5			13		309		166.3	
3/3/2022	5	60	10.0		199		23		35		34		6			14		309		164.0	
3/3/2022	6	60	10.0		198		15		26		42		5			13		309		163.8	
3/3/2022	7	60	9.9		200		15		53		71		5	5		13	14	309	309	164.6	164.7
3/3/2022	8	60	10.0		195		21		45		55		5			14		309		165.2	
3/3/2022	9	60	9.9		198		24		43		45		5			14		309		166.6	
3/3/2022	10	60	10.1		197		24		41		42		7			13		309		165.0	
3/3/2022	11	60	9.9		198		22		39		45		7	6		14		309	309	166.9	165.9
3/3/2022	12	60	9.7		194		17		35		50		6			17		309		166.9	
3/3/2022	13	60	10.0		193		12		26		53		5			16		309		164.2	
3/3/2022	14	60	10.3		201		21		43		51		5			16		309		163.6	
3/3/2022	15	60	10.3		194		19		32		42		5	5		16	15	309	309	163.7	164.6
3/3/2022	16	60	10.2		177		11		33		65		6			17		309		161.1	
3/3/2022	17	60	10.2		196		17		32		48		5			16		309		161.3	
3/3/2022	18	60	10.2		198		19		32		41		4			16		309		164.0	
3/3/2022	19	60	10.0		197		18		40		55		5	5		15		310	309	163.7	162.5
3/3/2022	20	60	10.2		200		16		30		48		4			15		309		165.3	
3/3/2022	21	60	10.1		198		21		33		39		4			15		309		165.6	
3/3/2022	22	60	10.1		199		13		25		48		4			15		310		165.7	
3/3/2022	23	60	10.2		198		15		29		46		4	4		15	15	309	309	166.0	165.6

Average:
Geometric Mean Average:

Limit:

197	19
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

50
≥ 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 3/3/22

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.
3/3/2022	0	60	9.2		186		21		13		0		1			13		305		167.2	
3/3/2022	1	60	9.4		171		29		25		0		1			14		304		166.2	
3/3/2022	2	60	9.3		176		24		20		0		2			13		305		166.8	
3/3/2022	3	60	9.3		178		23		3		0		1	1		14		311	306	167.0	166.8
3/3/2022	4	60	9.1		176		26		13		0		3			14		311		166.4	
3/3/2022	5	60	9.2		183		22		15		0		2			14		305		167.2	
3/3/2022	6	60	9.1		184		24		5		0		1			13		306		166.4	
3/3/2022	7	60	9.2		178		9		2		0		1	2		13	14	305	307	166.3	166.6
3/3/2022	8	60	9.3		178		7		1		0		1			14		306		166.2	
3/3/2022	9	60	9.1		182		10		10		1		2			14		303		166.5	
3/3/2022	10	60	9.2		175		7		0		0		2			13		306		165.3	
3/3/2022	11	60	9.1		184		6		1		0		2	2		16		304	305	166.1	166.0
3/3/2022	12	60	9.1		182		2		2		38		2			14		301		167.1	
3/3/2022	13	60	9.1		167		13		38		65		1			13		300		167.1	
3/3/2022	14	60	9.4		184		8		21		62		0			14		302		166.0	
3/3/2022	15	60	9.4		181		11		26		59		2	1		13	14	309	303	167.3	166.9
3/3/2022	16	60	9.3		175		3		10		73		4			14		305		166.6	
3/3/2022	17	60	9.2		187		2		11		79		2			14		310		166.3	
3/3/2022	18	60	9.2		181		14		16		13		1			14		317		167.0	
3/3/2022	19	60	9.2		182		19		20		6		1	2		14		311	311	166.6	166.6
3/3/2022	20	60	9.2		172		15		19		21		1			14		307		166.6	
3/3/2022	21	60	9.3		192		18		15		0		1			14		302		166.9	
3/3/2022	22	60	9.4		189		16		15		0		1			14		303		166.1	
3/3/2022	23	60	9.4		185		19		11		0		1	1		14	14	307	305	166.8	166.6

Average:
Geometric Mean Average:

Limit:

180	11
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

0
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average ppmc

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

see above
≤ 345 4-HR Block Average °F

see above
≤ 173 4-HR Block Average klb/hr

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 03-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	1	1	2	2	1	1	2	1
1	1	1	2	2	2	2	2	2	2	2	1
2	2	2	2	2	2	2	2	2	2	2	2
3	2	1	2	1	2	2	1	2	2	2	1
4	2	2	2	2	2	2	1	2	2	2	1
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	1	1	1	1	1	1	1	1	1
16	2	2	2	1	1	1	1	1	1	1	1
17	2	2	2	2	2	2	2	2	2	2	2
18	1	2	2	1	2	2	2	2	1	2	1
19	2	2	1	1	1	1	1	1	1	1	1
20	1	1	1	1	2	1	1	1	2	1	1
21	1	1	2	2	2	2	2	2	2	2	1
22	2	2	2	1	1	1	1	1	2	1	1
23	1	2	2	2	2	2	2	2	2	2	1

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 03-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

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 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown