



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



Date 6/23/22

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.
6/23/2022	0	60	10.4		194		15		68		79		3			14		304		169.3	
6/23/2022	1	60	10.6		198		12		51		77		3			14		304		167.1	
6/23/2022	2	60	10.6		199		5		43		89		3			14		305		165.7	
6/23/2022	3	60	10.6		198		12		47		74		4	3		14		304	304	166.2	167.1
6/23/2022	4	60	10.4		201		9		46		80		4			13		305		166.2	
6/23/2022	5	60	10.5		198		5		25		78		4			13		305		164.6	
6/23/2022	6	60	10.4		200		3		23		85		2			14		304		167.6	
6/23/2022	7	60	10.4		193		6		28		79		3	3		14	14	304	304	165.9	166.1
6/23/2022	8	60	10.3		192		8		33		76		4			14		305		166.8	
6/23/2022	9	60	10.5		198		8		42		80		4			14		304		165.4	
6/23/2022	10	60	10.4		198		14		39		65		3			14		304		166.8	
6/23/2022	11	60	10.4		199		22		46		52		3	4		14		305	304	167.5	166.6
6/23/2022	12	60	10.4		200		12		40		69		4			14		304		166.0	
6/23/2022	13	60	10.2		199		21		43		51		5			14		312		168.2	
6/23/2022	14	60	10.3		198		21		44		53		4			13		317		167.4	
6/23/2022	15	60	10.4		196		13		38		66		3	4		13	14	309	310	165.3	166.7
6/23/2022	16	60	10.3		195		7		36		81		4			13		304		165.8	
6/23/2022	17	60	10.2		201		16		42		63		3			14		303		168.9	
6/23/2022	18	60	10.4		198		15		41		64		3			14		308		166.1	
6/23/2022	19	60	10.4		198		18		43		58		3	4		13		308	306	166.1	166.8
6/23/2022	20	60	10.3		201		22		42		47		3			13		311		168.3	
6/23/2022	21	60	10.3		197		18		41		57		3			13		315		168.1	
6/23/2022	22	60	10.3		197		18		40		55		3			13		310		166.2	
6/23/2022	23	60	10.0		200		11		34		69		3	3		13	13	310	311	167.1	167.4

Average: Geometric Mean Average:	198	12	OR	71	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

- 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 6/23/22

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.
6/23/2022	0	60	10.0		184		18		27		35		2			14		317		168.2	
6/23/2022	1	60	10.0		179		15		24		39		2			14		314		168.6	
6/23/2022	2	60	10.2		191		9		17		48		2			13		318		166.8	
6/23/2022	3	60	10.1		172		0		11		99		3	2		13		316	316	168.1	168.0
6/23/2022	4	60	9.8		177		1		15		95		2			12		308		167.7	
6/23/2022	5	60	9.8		176		1		15		91		1			13		308		167.2	
6/23/2022	6	60	9.6		181		1		14		91		1			13		310		168.1	
6/23/2022	7	60	9.7		176		0		11		98		1	1		13	13	310	309	167.0	167.5
6/23/2022	8	60	9.5		149		7		35		81		13			13		307		170.6	
6/23/2022	9	60	9.8		145		0		15		100		1			13		289		168.3	
6/23/2022	10	60	9.5		173		0		12		100		1			12		293		164.4	
6/23/2022	11	60	9.5		179		2		23		92		1	4		12		301	297	167.3	167.6
6/23/2022	12	60	9.7		180		1		27		95		1			12		300		168.0	
6/23/2022	13	60	9.6		180		3		25		86		2			13		299		167.6	
6/23/2022	14	60	10.0		164		2		22		93		1			13		296		167.6	
6/23/2022	15	60	9.9		176		1		14		90		1	1		15	13	295	297	167.1	167.6
6/23/2022	16	60	9.8		184		9		18		50		1			14		310		167.1	
6/23/2022	17	60	9.8		184		13		23		44		1			13		315		168.5	
6/23/2022	18	60	9.9		190		9		15		42		1			12		313		166.9	
6/23/2022	19	60	10.0		183		14		19		26		1	1		13		313	313	166.9	167.4
6/23/2022	20	60	10.1		189		13		22		40		1			13		309		168.8	
6/23/2022	21	60	10.1		181		11		20		47		1			13		307		168.0	
6/23/2022	22	60	10.1		185		11		18		36		1			13		307		167.4	
6/23/2022	23	60	10.1		186		6		12		46		1	1		13	13	310	308	166.7	167.7

Average:
Geometric Mean Average:

Limit:

178	2
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

87
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≤ 12 8-HR. Block Average

lb/hr

see above
≤ 345 °F 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 23-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 23-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	1	0	1	1	1	1	1	0	1	1	1
1	1	1	0	0	0	0	0	0	0	0	0
2	0	1	1	1	1	0	1	0	1	0	0
3	0	0	1	1	1	1	1	1	1	1	1
4	1	1	1	0	1	0	0	1	0	0	0
5	1	1	1	1	1	1	1	1	1	1	1
6	2	IBC	5	IBC	1	0	0	1	1	0	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	0	1	1	1	1	1	1	1
12	1	1	1	1	1	1	1	1	1	1	1
13	1	0	0	1	1	1	0	1	1	1	1
14	1	1	1	1	1	1	1	1	0	1	1
15	0	1	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	1	1	0	0	1	0
17	0	0	1	1	0	0	0	1	1	0	0
18	1	0	1	1	1	1	0	1	1	1	1
19	0	1	1	1	1	1	1	1	1	1	1
20	1	1	1	1	1	1	1	1	1	1	1
21	1	1	1	0	0	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