



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



Date 9/15/22

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.
9/15/2022	0	60	10.3		199		22		56		61		4			13		309		165.3	
9/15/2022	1	60	10.4		198		33		63		47		4			13		310		166.7	
9/15/2022	2	60	10.2		197		16		46		66		4			13		309		166.5	
9/15/2022	3	60	10.3		197		23		40		43		4	4		14		309	309	166.0	166.1
9/15/2022	4	60	10.2		194		21		46		55		3			13		309		166.5	
9/15/2022	5	60	10.6		197		19		25		22		4			13		309		160.3	
9/15/2022	6	60	10.3		194		24		53		56		5			13		309		165.4	
9/15/2022	7	60	10.5		194		27		82		67		5	4		13	13	310	309	165.1	164.3
9/15/2022	8	60	10.5		198		23		79		71		4			14		309		166.3	
9/15/2022	9	60	10.6		195		15		41		63		4			13		309		163.9	
9/15/2022	10	60	10.6		199		21		60		65		4			14		309		164.9	
9/15/2022	11	60	10.3		200		21		57		63		4	4		14		310	309	165.7	165.2
9/15/2022	12	60	10.4		197		20		63		68		4			14		310		166.7	
9/15/2022	13	60	10.6		199		11		56		80		5			13		307		162.9	
9/15/2022	14	60	10.4		199		10		30		66		4			13		307		167.1	
9/15/2022	15	60	10.6		200		9		28		69		5	4		14	14	302	306	164.0	165.2
9/15/2022	16	60	10.5		198		11		38		72		4			13		300		165.2	
9/15/2022	17	60	10.5		200		16		39		60		4			13		300		166.3	
9/15/2022	18	60	10.4		199		20		45		54		3			14		306		165.3	
9/15/2022	19	60	10.4		197		21		48		57		3	4		14		312	304	166.0	165.7
9/15/2022	20	60	10.6		199		22		46		51		3			14		313		164.9	
9/15/2022	21	60	10.5		199		23		62		63		3			13		314		165.7	
9/15/2022	22	60	10.4		198		16		49		67		3			14		315		165.9	
9/15/2022	23	60	10.3		196		5		36		86		4	3		13	14	303	311	165.7	165.6

Average:
Geometric Mean Average:

Limit:

198	17
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

63
≥ 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

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 9/15/22

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.	4 Hr Block
9/15/2022	0	0	18.2	IF	351	IF	24	IF	33	IBF	27	IBF	1767	IF			0		271		16.0	
9/15/2022	1	0	18.4	IF	306	IF	24	IF	15	IBF	0	IBF	2648	IF			0		223		18.9	
9/15/2022	2	0	18.1	IF	287	IF	19	IF	18	IBF	0	IBF	1655	IF			2		252		19.0	
9/15/2022	3	0	14.5	ICF	116	ICF	3	ICF	5	IBF	35	IBCF	5	ICF	1519	ICF	14		262	252	26.9	20.2
9/15/2022	4	0	11.6	IBCF	104	IBCF	23	IBCF	3	IBF	0	IBCF	152	IBCF			14		263		38.4	
9/15/2022	5	28	13.4	IF^	175	IF^	9	IF^	18	IBCF^	48	IBCF^	18	IF^			14		296		82.4	
9/15/2022	6	60	12.6		182		10		36		73		11				13		312		135.5	
9/15/2022	7	60	11.6		171		20		56		65		7	9		16	14	311	311	165.4	150.4	
9/15/2022	8	60	11.6		178		11		31		64		5				13		310		166.7	
9/15/2022	9	60	11.6		171		14		29		53		5				13		310		165.6	
9/15/2022	10	60	11.7		177		11		18		42		7				13		310		164.4	
9/15/2022	11	60	10.8		177		22		82		73		7	6		14		310	310	166.2	165.7	
9/15/2022	12	60	11.2		192		22		45		52		4				14		310		166.3	
9/15/2022	13	60	11.0		179		15		31		52		6				14		312		165.0	
9/15/2022	14	60	10.9		173		8		24		66		6				14		310		166.1	
9/15/2022	15	60	11.1		166		6		18		69		6	6		14	13	310	310	165.2	165.7	
9/15/2022	16	60	11.3		174		11		21		48		5				14		310		166.1	
9/15/2022	17	60	11.2		167		15		35		58		6				14		310		164.4	
9/15/2022	18	60	11.0		171		11		28		61		5				14		310		167.1	
9/15/2022	19	60	11.2		170		18		46		62		6	6		14		309	310	166.6	166.0	
9/15/2022	20	60	11.2		175		11		29		61		5				14		310		166.2	
9/15/2022	21	60	11.3		171		9		21		56		4				14		310		165.9	
9/15/2022	22	60	11.1		165		6		20		73		4				14		310		167.7	
9/15/2022	23	60	11.1		158		6		20		72		5	5		14	14	310	310	165.9	166.4	

Average:
Geometric Mean Average:

Limit:

173	11
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

62
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 15-Sep-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	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	3	IC	5	IC	0	0	0	0	0	0	1
7	1		1		1	0	0	0	0	0	0
8	0		0		0	0	0	0	0	0	0
9	0		0		0	0	0	0	0	0	0
10	0		0		0	0	0	0	0	0	0
11	0		0		0	0	1	1	0	1	0
12	0		0		1	0	1	1	1	0	1
13	0		1		0	0	0	0	0	0	0
14	0		0		0	0	0	0	0	0	0
15	0		0		1	0	0	0	0	0	0
16	0		0		0	0	0	0	0	0	0
17	0		0		0	0	0	0	0	0	0
18	0		0		0	0	0	0	0	0	0
19	0		0		0	0	0	0	0	0	0
20	0		0		0	0	0	0	0	0	0
21	0		0		0	0	0	0	0	0	0
22	0		0		0	0	0	0	0	0	0
23	0		0		0	0	0	0	0	0	0

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 15-Sep-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	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
1	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
2	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	0	IF	0	IF	1	IF	1
3	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
4	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
5	0	IF	0	IF	0	IF	0	IF	0	IF	1	IF^	1	^	1	^	1	^	1	^	1
6	2	IBC	5	IBC	1		1		1		1		1		1		1		1		2
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	2		1		1		1		1		1		1		1		1		1		1
12	1		1		1		1		1		1		1		1		1		1		1
13	1		1		1		1		1		1		1		1		1		1		1
14	1		1		1		1		1		1		1		1		1		1		1
15	1		1		1		1		1		1		1		1		1		1		1
16	1		1		1		1		1		1		1		1		1		1		1
17	1		1		1		1		1		1		1		1		1		1		1
18	1		1		1		1		1		1		1		1		1		1		1
19	1		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		1		1		1		1		1		1		1		1
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