



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



Date 10/9/22

Wheel Plant Wheelabrator North Andover
Unit 1 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
10/9/2022	0	60	10.3		189		5		33		84		6		23		309		164.3	
10/9/2022	1	60	10.0		185		5		32		84		5		20		309		168.0	
10/9/2022	2	60	10.3		195		5		30		85		6		18		310		162.9	
10/9/2022	3	60	10.6		196		4		33		87		7	6	22		309	309	160.5	163.9
10/9/2022	4	60	10.4		199		14		74		82		8		19		310		164.5	
10/9/2022	5	60	10.4		195		10		31		68		6		19		309		163.4	
10/9/2022	6	60	10.2		195		4		22		82		5		18		310		165.6	
10/9/2022	7	60	10.1		184		6		37		83		6	6	18	20	309	309	165.4	164.7
10/9/2022	8	60	10.2		192		8		38		80		5		18		309		164.6	
10/9/2022	9	60	10.1		194		6		33		81		5		18		309		164.3	
10/9/2022	10	60	10.1		191		9		43		80		5		13		310		164.3	
10/9/2022	11	60	10.2		192		7		36		81		6	5	11		310	309	166.3	164.9
10/9/2022	12	60	10.4		197		7		37		81		5		17		309		165.7	
10/9/2022	13	60	10.3		192		8		41		80		5		13		310		165.8	
10/9/2022	14	39	9.8		187		7		38	IBF	83	IBF	4		8		324		98.9	
10/9/2022	15	60	9.8	IB	186	IB	10	IB					4	IB	13	14	276	305	15.5	111.5
10/9/2022	16	60	9.8	IB	186	IB	10	IB					4	IB	15		287		0.1	
10/9/2022	17	60	9.8	IB	186	IB	10	IB					4	IB	15		290		0.0	
10/9/2022	18	60	9.8	IB	186	IB	10	IB					4	IB	15		328		0.0	
10/9/2022	19	60	9.8	IB	186	IB	10	IB					4	IB	14		295	300	0.0	0.0
10/9/2022	20	60	9.8	IB	186	IB	10	IB					4	IB	13		277		0.0	
10/9/2022	21	60	9.8	IB	186	IB	10	IB					4	IB	13		235		0.0	
10/9/2022	22	60	9.8	IB	186	IB	10	IB					4	IB	13		217		0.0	
10/9/2022	23	60	9.8	IB	186	IB	10	IB					4	IB	13	14	231	240	0.0	0.0

Average:
Geometric Mean Average:

Limit:

192	7
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

82
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

see above
≥ 12 8-HR. Block Average

see above
≤ 345 °F 4-HR Block Average

see above
≤ 173 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 10/9/22

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.
10/9/2022	0	60	11.3		197		23		97		76		15			15		310		166.3	
10/9/2022	1	60	11.1		198		15		67		78		14			15		310		164.9	
10/9/2022	2	60	11.2		198		13		69		81		15			13		310		165.1	
10/9/2022	3	60	11.7		196		16		74		78		19	16		13		310	310	166.7	165.8
10/9/2022	4	60	12.2		197		28		122		77		26			13		312		165.7	
10/9/2022	5	60	12.3		197		12		57		79		23			13		311		164.8	
10/9/2022	6	60	12.1		199		25		74		66		19			13	14	314		165.2	
10/9/2022	7	60	12.0		197		10		56		83		18	22		13		317	313	164.4	165.0
10/9/2022	8	60	12.0		199		20		65		69		17			13		318		165.3	
10/9/2022	9	60	12.1		196		18		67		73		18			14		313		164.4	
10/9/2022	10	60	12.3		198		14		68		79		21			14		310		165.8	
10/9/2022	11	60	12.5		199		18		75		76		21	19		14		310	313	165.5	165.2
10/9/2022	12	60	12.3		195		19		89		78		20			12		309		163.1	
10/9/2022	13	60	11.6		197		20		97		79		18			10		310		165.3	
10/9/2022	14	40	13.2		209		16		74		79		292			8		316		120.3	
10/9/2022	15	32	17.7		207		15		2		0		2269	650		14	12	238	293	18.7	116.8
10/9/2022	16	55	13.5		58		7		0		0		296			13		219		37.9	
10/9/2022	17	60	14.2		81		6		4		0		7			13		237		85.0	
10/9/2022	18	60	11.9		129		6		69		91		209			12		265		110.8	
10/9/2022	19	60	11.2		163		5		83		94		14	132		13		310	258	141.4	93.8
10/9/2022	20	60	10.0		170		6		68		92		14			13		310		165.4	
10/9/2022	21	60	10.5		186		5		62		92		9			13		310		159.9	
10/9/2022	22	60	10.6		172		6		66		91		10			14		310		156.5	
10/9/2022	23	60	11.0		185		9		90		90		12	11		13	13	310	310	154.5	159.1

Average:
Geometric Mean Average:

Limit:

180	12
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

72
≥ 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 09-Oct-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	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1
3	1	1	1	1	1	1	1	1	1	1	1
4	1	1	1	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	1	1	1	1
6	3	IC	5	IC	1	1	1	1	1	1	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	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	I	0	0	0	0	0	0
15	0	0	0	0	0	0	1	1	1	1	0
16	0	0	0	0	0	0	1	0	0	0	0
17	0	0	0	0	0	0	0	1	0	0	0
18	1	0	0	0	1	1	0	0	0	1	0
19	1	1	1	1	1	1	1	1	0	1	0
20	0	0	0	0	0	1	0	0	0	1	0
21	1	0	1	1	1	1	0	0	0	1	0
22	0	1	0	0	0	0	0	0	0	0	0
23	0	0	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 09-Oct-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	1	1	1	1	1	1	1	1	1	1	
1	1	1	1	1	1	1	1	1	1	1	1	
2	1	1	1	1	1	1	1	1	1	1	1	
3	1	1	1	1	1	1	1	1	1	1	1	
4	1	1	1	1	1	1	1	1	1	1	1	
5	1	1	1	1	1	1	1	1	1	1	1	
6	2	IBC	5	IBC	1	1	1	1	1	1	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	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	I	0	0	IF	0	IF	0
15	1	IF	1	IF	1	IF	1	1	1	IF	1	1
16	1	IF	1	IF	1	IF	1	1	1	IF	1	1
17	1	1	1	1	1	1	1	1	1	1	1	1
18	1	1	1	1	1	1	1	1	1	1	1	1
19	1	1	1	1	1	1	1	1	1	1	1	1
20	1	1	1	1	1	1	1	1	1	1	1	1
21	1	1	1	1	1	1	1	1	1	1	1	1
22	1	1	1	1	1	1	1	1	1	1	1	1
23	1	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