



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



Date 11/1/22

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.
11/1/2022	0	60	10.7		188		3		39		91		7			14		305		164.0	
11/1/2022	1	60	10.9		198		5		41		89		6			14		302		165.0	
11/1/2022	2	60	10.7		197		4		38		88		6			14		306		166.2	
11/1/2022	3	60	10.7		198		5		39		88		5	6		14		309	305	164.8	165.0
11/1/2022	4	60	10.5		186		10		57		82		6			14		309		157.5	
11/1/2022	5	60	10.5		195		9		52		83		7			14		310		165.4	
11/1/2022	6	60	10.4		195		6		40		85		8			14	14	310		165.0	
11/1/2022	7	60	10.8		181		3		32		89		8	7		14		308	309	163.2	162.8
11/1/2022	8	60	10.8		189		4		34		89		7			14		309		164.3	
11/1/2022	9	60	10.7		196		5		41		89		7			13		309		163.9	
11/1/2022	10	60	10.6		197		5		40		87		8			14		309		165.7	
11/1/2022	11	60	10.6		198		1		22		94		9	8		14		310	310	164.6	164.6
11/1/2022	12	60	10.5		199		6		42		86		8			14		309		164.7	
11/1/2022	13	60	10.7		195		15		66		77		7			14		309		165.4	
11/1/2022	14	60	10.8		198		10		53		81		7			14		310		163.9	
11/1/2022	15	60	10.7		193		2		27		94		9	8		14	14	309	309	164.8	164.7
11/1/2022	16	60	10.6		191		1		25		97		8			14		309		165.2	
11/1/2022	17	60	10.7		200		1		26		96		8			14		309		165.0	
11/1/2022	18	60	10.4		195		2		40		94		8			14		310		167.2	
11/1/2022	19	60	10.5		199		3		32		89		7	8		14		309	309	168.2	166.4
11/1/2022	20	60	10.5		198		4		33		87		7			14		309		166.7	
11/1/2022	21	60	10.5		198		4		31		86		8			14		310		165.4	
11/1/2022	22	60	10.4		197		11		45		76		8			14		309		166.1	
11/1/2022	23	60	10.5		195		11		45		74		8	8		13	14	309	309	167.0	166.3

Average: Geometric Mean Average:	195	4	OR	89	see above	see above	see above	see above			
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 4-HR Block Average	ppmc	≥ 12 8-HR. Block Average	lb/hr	≤ 345 °F 4-HR Block Average	≤ 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 11/1/22

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.
11/1/2022	0	60	10.4		189		12		45		73		3			13		310		165.3	
11/1/2022	1	60	10.4		192		11		42		73		2			13		310		165.3	
11/1/2022	2	60	10.3		191		7		40		82		2			13		304		165.7	
11/1/2022	3	60	10.2		184		14		67		79		2	2		14		300	306	165.6	165.5
11/1/2022	4	60	10.2		190		14		59		76		3			13		303		165.0	
11/1/2022	5	60	10.2		194		8		35		79		2			14		310		165.2	
11/1/2022	6	60	10.0		195		12		39		70		3			13		315		165.2	
11/1/2022	7	60	10.4		194		5		22		77		3	3		14	13	317	311	165.6	165.2
11/1/2022	8	60	10.7		188		16		58		73		7			13		317		165.8	
11/1/2022	9	60	10.7		188		11		45		76		3			13		307		165.9	
11/1/2022	10	60	10.6		191		6		36		83		2			13		301		165.6	
11/1/2022	11	60	10.4		193		3		23		86		3	4		13		302	307	166.2	165.9
11/1/2022	12	60	10.4		196		5		22		77		3			13		311		165.1	
11/1/2022	13	60	10.3		193		5		26		79		2			13		315		165.5	
11/1/2022	14	60	10.3		195		4		20		82		3			13		312		164.6	
11/1/2022	15	60	10.7		189		4		22		82		3	3		13	13	310	312	155.4	162.7
11/1/2022	16	60	10.2		194		3		22		87		4			13		310		166.0	
11/1/2022	17	60	10.3		193		4		30		85		3			13		310		165.3	
11/1/2022	18	60	10.1		187		3		21		85		2			14		310		166.5	
11/1/2022	19	60	10.1		190		6		27		78		2	3		14		310	310	166.8	166.2
11/1/2022	20	60	10.1		197		9		30		71		2			13		310		167.1	
11/1/2022	21	60	10.2		193		9		28		69		2			14		310		166.5	
11/1/2022	22	60	10.3		189		8		25		70		2			13		310		166.1	
11/1/2022	23	60	10.4		194		10		28		66		2	2		13	13	310	310	167.0	166.7

Average:
Geometric Mean Average:

Limit:

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

OR

78
≥ 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

Status Flags

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 01-Nov-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	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	0	0	0	0	0	0	0	0	1	0	0
23	0	0	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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 01-Nov-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	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