



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



Date 4/17/23

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.
4/17/2023	0	60	10.2		142		4		93		96		2			15		310		167.4	
4/17/2023	1	60	10.3		143		8		98		92		2			15		309		167.6	
4/17/2023	2	60	10.3		139		21		94		78		2			15		309		165.7	
4/17/2023	3	60	10.3		144		21		91		77		2	2		14		309	309	167.8	167.1
4/17/2023	4	60	10.2		143		19		91		79		1			14		309		167.2	
4/17/2023	5	60	10.3		139		16		61		74		2			13		309		166.2	
4/17/2023	6	60	10.3		139		17		62		73		2			13		309		165.9	
4/17/2023	7	60	10.2		142		9		53		82		3	2		13	14	310	309	165.5	166.2
4/17/2023	8	60	10.4		139		16		58		72		1			13		309		168.9	
4/17/2023	9	60	10.4		142		4		45		91		2			13		309		165.4	
4/17/2023	10	60	10.4		142		5		42		89		2			13		310		164.9	
4/17/2023	11	60	10.3		138		3		42		93		3	2		12		309	309	164.3	165.9
4/17/2023	12	60	10.2		141		11		48		78		3			12		310		166.4	
4/17/2023	13	60	10.6		145		13		56		77		0			13		309		168.7	
4/17/2023	14	60	10.4		136		16		79		79		1			13		309		164.9	
4/17/2023	15	60	10.1		138		10		59		82		2	2		12	13	309	309	163.1	165.8
4/17/2023	16	60	10.1		143		22		101		78		2			12		309		165.4	
4/17/2023	17	60	10.2		142		18		78		77		1			10		309		165.9	
4/17/2023	18	60	9.9		139		21		79		73		2			11		309		165.3	
4/17/2023	19	60	9.9		141		20		98		80		2	2		14		310	309	164.9	165.4
4/17/2023	20	60	10.1		141		24		114		79		3			16		309		164.2	
4/17/2023	21	60	10.1		141		18		78		77		3			14		309		164.8	
4/17/2023	22	60	9.9		139		11		47		77		3			13		309		167.3	
4/17/2023	23	60	10.2		140		27		97		72		5	3		13	13	309	309	168.5	166.2

Average:
Geometric Mean Average:

Limit:

141	13
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

82
≥ 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 4/17/23

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.
4/17/2023	0	60	11.4		140		6		25		76		2			13		310		166.3	
4/17/2023	1	60	11.4		139		8		31		75		2			13		310		165.9	
4/17/2023	2	60	11.3		140		10		34		71		2			14		310		166.0	
4/17/2023	3	60	11.3		139		8		28		71		3	2		14		310	310	166.4	166.1
4/17/2023	4	60	11.2		140		11		28		61		3			13		310		167.4	
4/17/2023	5	60	11.2		139		11		19		43		3			13		310		165.9	
4/17/2023	6	60	11.2		139		13		16		21		5			13		310		166.8	
4/17/2023	7	60	11.2		139		6		9		37		4	4		13	13	310	310	166.1	166.6
4/17/2023	8	60	11.4		139		5		7		28		3			14		310		166.6	
4/17/2023	9	60	11.2		141		3		10		66		3			13		310		166.9	
4/17/2023	10	60	11.5		139		2		7		63		8			13		310		168.3	
4/17/2023	11	60	11.3		138		1		3		72		4	5		13		311	310	165.5	166.8
4/17/2023	12	60	20.4	IBM	0	IBM	0	IBM	5	IBM	100	IBM	0	IBM		13		309		165.3	
4/17/2023	13	60	20.3	IBM	0	IBM	0	IBM	28	IBM	100	IBM	0	IBM		13		310		167.0	
4/17/2023	14	60	20.3	IBM	0	IBM	0	IBM	22	IBM	100	IBM	0	IBM		13		310		165.8	
4/17/2023	15	60	20.3	IBM	0	IBM	0	IBM	23	IBM	100	IBM	0	IBM	0	IBM	13	310	310	166.4	166.2
4/17/2023	16	60	20.3	IBM	0	IBM	0	IBM	87	IBM	100	IBM	0	IBM		13		310		166.7	
4/17/2023	17	60	19.0	IBM	16	IBM	8	IBM	70	IBM	89	IBM	50	IBM		13		310		166.3	
4/17/2023	18	60	11.0		140		9		26		67		2			14		309		165.9	
4/17/2023	19	60	10.9		141		14		36		62		1	2		13		310	310	165.7	166.2
4/17/2023	20	60	11.0		139		15		37		61		1			13		310		166.7	
4/17/2023	21	60	11.1		138		10		25		58		1			13		310		167.8	
4/17/2023	22	60	11.0		143		4		13		72		0			13		310		166.6	
4/17/2023	23	60	11.1		140		13		31		57		1	1		13	13	310	310	165.5	166.6

Average:
Geometric Mean Average:

Limit:

140	7
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

62
≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 17-Apr-2023

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	2	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	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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 17-Apr-2023

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	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	IBC	4	IBC	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0
22	0	0	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