



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



Date 8/11/23

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.
8/11/2023	0	60	10.1		140		17		90		81		0			15		310		168.6	
8/11/2023	1	60	10.3		141		16		81		80		0			15		309		167.7	
8/11/2023	2	60	10.1		142		10		72		86		0			14		310		166.5	
8/11/2023	3	60	10.1		140		17		79		79		0	0		15		309	309	168.1	167.7
8/11/2023	4	60	10.1		142		6		55		89		0			15		310		166.5	
8/11/2023	5	60	10.1		141		15		79		81		0			14		309		167.9	
8/11/2023	6	60	10.1		141		16		79		80		0			15		310		163.6	
8/11/2023	7	60	10.3		140		23		95		76		0	0		15	15	310	310	167.8	166.5
8/11/2023	8	60	10.5		141		16		91		82		1			14		309		164.5	
8/11/2023	9	60	10.4		139		12		82		85		1			15		309		166.5	
8/11/2023	10	60	10.4		143		18		93		81		1			14		310		165.5	
8/11/2023	11	60	10.0		143		9		73		88		0	1		15		309	309	167.2	165.9
8/11/2023	12	60	10.1		140		2		60		97		0			14		309		167.7	
8/11/2023	13	60	10.4		140		11		83		86		0			14		310		166.6	
8/11/2023	14	60	10.3		140		16		101		84		0			15		309		168.0	
8/11/2023	15	60	9.8		137		7		87		92		105	26		15	15	309	309	164.3	166.7
8/11/2023	16	60	9.8		140		6		81		92		7			15		311		163.8	
8/11/2023	17	60	10.1		138		16		105		85		1			14		309		167.1	
8/11/2023	18	60	10.0		142		8		84		90		1			15		310		164.7	
8/11/2023	19	60	9.8		140		14		103		86		0	2		15		310	310	165.6	165.3
8/11/2023	20	60	10.0		141		26		158		84		0			15		309		167.7	
8/11/2023	21	60	9.9		139		16		120		86		1			15		309		164.3	
8/11/2023	22	60	9.9		141		7		81		92		0			15		310		168.3	
8/11/2023	23	60	10.0		142		10		91		89		0	0		14	15	309	309	166.7	166.8

Average:
Geometric Mean Average:

Limit:

140	12
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

87
≥ 80% 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 8/11/23

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.
8/11/2023	0	60	10.2		141		0		55		99		4			16		310		167.9	
8/11/2023	1	60	10.3		137		0		47		100		5			14		310		167.9	
8/11/2023	2	60	10.2		139		0		56		100		5			7		310		166.5	
8/11/2023	3	60	10.2		138		0		46		100		5	5		16		310	310	167.9	167.6
8/11/2023	4	60	9.9		141		0		43		100		5			21		310		167.4	
8/11/2023	5	60	10.2		137		0		28		100		5			12		310		167.7	
8/11/2023	6	60	10.2		141		0		14		100		6			15		310		164.9	
8/11/2023	7	60	10.2		139		5		54		91		7	6		10	14	310	310	165.4	166.4
8/11/2023	8	60	10.2		138		0		38		100		6			14		310		166.8	
8/11/2023	9	60	10.4		138		0		38		99		6			12		309		167.0	
8/11/2023	10	60	10.2		142		1		41		98		6			11		310		167.2	
8/11/2023	11	60	9.9		138		0		25		100		6	6		13		309	310	166.3	166.8
8/11/2023	12	60	10.0		140		0		38		100		5			7		311		167.7	
8/11/2023	13	60	10.1		141		0		62		100		5			11		310		167.7	
8/11/2023	14	60	10.1		140		5		81		94		5			14		309		167.4	
8/11/2023	15	60	10.0		137		0		59		99		6	5		17	12	310	310	167.0	167.4
8/11/2023	16	60	9.8		140		14		138		90		6			19		311		168.4	
8/11/2023	17	60	10.1		140		9		103		91		6			18		310		165.9	
8/11/2023	18	60	10.1		139		1		80		98		5			15		310		167.6	
8/11/2023	19	60	9.9		143		2		82		98		6	6		15		311	310	167.5	167.4
8/11/2023	20	60	10.1		137		9		112		92		5			14		309		166.5	
8/11/2023	21	60	10.2		139		7		91		93		5			14		310		166.7	
8/11/2023	22	60	10.1		139		1		74		99		5			14		310		168.3	
8/11/2023	23	60	10.2		139		0		76		100		4	5		13	15	310	310	167.1	167.2

Average:
Geometric Mean Average:

Limit:

139	0
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

100
≥ 80% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

see above
≥ 12 lb/hr 8-HR. Block Average

see above
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see above
≤ 173 klb/hr 4-HR Block Average

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 11-Aug-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	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	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 11-Aug-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	2	IBC	5	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	1	1	1	0	0
20	1	1	1	1	1	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