



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



Date 8/8/23

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.
8/8/2023	0	60	10.2		141		17		78		78		0			14		309		163.8	
8/8/2023	1	60	10.4		141		20		83		76		0			13		310		165.2	
8/8/2023	2	60	10.2		141		20		82		75		0			13		309		167.4	
8/8/2023	3	60	10.3		141		14		63		78		0	0		14		310	309	165.9	165.6
8/8/2023	4	60	10.0		141		18		63		71		0			11		309		168.0	
8/8/2023	5	60	9.9		142		18		71		74		0			14		310		170.2	
8/8/2023	6	60	10.4		137		17		69		76		0			13		309		163.6	
8/8/2023	7	60	10.1		142		26		99		74		1	0		13	13	310	309	165.5	166.8
8/8/2023	8	60	9.9		143		8		78		90		0			14		310		166.8	
8/8/2023	9	60	10.5		139		5		62		92		0			14		308		160.7	
8/8/2023	10	60	10.2		141		12		83		86		0			15		310		161.8	
8/8/2023	11	60	9.9		143		3		64		95		0	0		14		310	309	162.2	162.9
8/8/2023	12	60	10.4		138		16		103		84		0			15		309		161.1	
8/8/2023	13	60	9.9		145		0		52		100		0			14		310		156.4	
8/8/2023	14	60	9.8		141		1		53		98		0			12		309		160.1	
8/8/2023	15	60	9.6		140		5		65		92		0	0		13	14	310	310	165.7	160.8
8/8/2023	16	60	10.0		141		22		117		81		0			14		310		162.4	
8/8/2023	17	60	10.0		141		13		84		85		0			14		309		164.5	
8/8/2023	18	60	11.8		126		2		91		97		4			13		295		84.3	
8/8/2023	19	60	9.9		139		5		98		95		3	2		14		309	306	123.4	133.6
8/8/2023	20	60	9.5		145		22		125		82		0			13		312		162.2	
8/8/2023	21	60	9.7		139		22		119		82		0			13		309		166.9	
8/8/2023	22	60	9.9		140		21		100		79		0			13		310		164.2	
8/8/2023	23	60	9.9		142		19		107		82		0	0		13	13	309	310	162.1	163.8

Average: Geometric Mean Average:	140	9	OR	88	see above	see above	see above	see above
Limit:	≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 80% Removal Efficiency	≤ 69 ppmc 4-HR Block Average	≥ 12 lb/hr 8-HR. Block Average	≤ 345 °F 4-HR Block Average	≤ 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 8/8/23

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.
8/8/2023	0	60	10.1		139		1		56		99		3			14		310		167.4	
8/8/2023	1	60	10.4		140		2		59		97		3			13		310		167.4	
8/8/2023	2	60	10.3		139		13		93		86		3			13		310		168.3	
8/8/2023	3	60	10.3		139		1		50		98		3	3		13		310	310	166.1	167.3
8/8/2023	4	60	10.2		141		0		47		99		4			13		310		168.5	
8/8/2023	5	59	10.3		138		4		68		95		6			13		309		168.0	
8/8/2023	6	60	10.0		141		3		50		94		4			13		310		167.0	
8/8/2023	7	60	10.4		140		0		36		100		4	4		13	13	310	310	164.3	167.0
8/8/2023	8	60	10.3		139		0		54		100		5			13		310		167.6	
8/8/2023	9	60	10.6		140		0		67		100		5			13		310		161.5	
8/8/2023	10	60	10.5		141		17		138		88		5			12		310		162.8	
8/8/2023	11	60	10.3		139		3		74		96		5	5		12		310	310	161.6	163.4
8/8/2023	12	60	10.3		137		0		54		100		5			12		310		160.3	
8/8/2023	13	60	10.0		141		0		40		100		5			14		310		158.5	
8/8/2023	14	60	9.7		136		0		52		100		6			8		310		154.4	
8/8/2023	15	60	9.8		141		0		47		100		5	5		12	12	309	310	167.4	160.2
8/8/2023	16	60	9.9		140		3		97		97		5			13		310		163.8	
8/8/2023	17	60	9.8		139		1		69		99		5			13		310		165.1	
8/8/2023	18	60	14.7		130		0		22		100		288			14		261		35.8	
8/8/2023	19	60	16.3		136		8		3	IBF	0	IBF	2042	585		13		250	283	9.1	93.4
8/8/2023	20	60	14.5		80		0		1		100		199			12		260		38.6	
8/8/2023	21	60	10.4		134		5		70		92		10			13		311		137.7	
8/8/2023	22	60	10.1		139		5		96		95		4			12		310		163.9	
8/8/2023	23	60	10.3		140		1		91		98		4	54		13	13	310	298	165.6	126.5

Average:
Geometric Mean Average:

Limit:

136	1
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

99
≥ 80% 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

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 08-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 08-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	I	0	0	0	0	0
6	2	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