



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



Date 8/17/23

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.
8/17/2023	0	60	10.1		140		13		70		82		0			14		309		165.7	
8/17/2023	1	60	10.2		141		19		79		76		0			14		310		166.2	
8/17/2023	2	60	10.1		142		16		68		76		0			15		310		167.6	
8/17/2023	3	60	10.1		138		19		72		73		0	0		13		309	309	168.3	167.0
8/17/2023	4	60	10.2		144		17		69		76		0			14		309		167.6	
8/17/2023	5	60	10.2		140		23		85		73		0			13		309		168.6	
8/17/2023	6	60	10.1		140		17		70		75		0			13		310		165.5	
8/17/2023	7	60	10.3		140		17		67		74		0	0		14	14	309	309	165.4	166.8
8/17/2023	8	60	10.4		144		27		120		77		0			14		310		165.5	
8/17/2023	9	60	10.2		141		32		152		79		0			13		309		167.2	
8/17/2023	10	60	9.9		139		20		91		78		0			14		309		166.4	
8/17/2023	11	60	10.1		142		15		72		79		0	0		13		309	309	166.8	166.5
8/17/2023	12	60	10.2		141		15		62		77		0			13		309		168.0	
8/17/2023	13	60	10.1		141		6		49		88		0			14		310		166.4	
8/17/2023	14	60	10.1		142		9		46		81		0			14		310		166.7	
8/17/2023	15	60	10.3		140		41		96		58		0	0		13	14	309	309	168.4	167.4
8/17/2023	16	60	10.5		140		20		85		77		0			14		309		165.9	
8/17/2023	17	60	10.2		142		21		88		76		0			13		309		167.0	
8/17/2023	18	60	10.0		141		17		74		78		0			13		310		168.1	
8/17/2023	19	60	10.0		141		19		67		72		0	0		13		309	309	166.7	166.9
8/17/2023	20	60	10.0		142		15		62		76		0			13		309		165.1	
8/17/2023	21	60	10.2		138		17		62		72		0			14		309		163.6	
8/17/2023	22	60	9.9		144		11		46		76		0			13		310		166.6	
8/17/2023	23	60	10.0		141		19		66		71		0	0		13	14	309	309	165.9	165.3

Average: Geometric Mean Average:	141	17	OR	76	see above	see above	see above	see above			
Limit:	≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 80% 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 8/17/23

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.
8/17/2023	0	60	9.8		140		0		37		100		4			16		310		167.5	
8/17/2023	1	60	9.8		139		4		57		93		5			14		310		167.9	
8/17/2023	2	60	9.8		141		0		41		100		4			14		311		167.1	
8/17/2023	3	60	9.8		140		2		54		96		5	4		13		310	310	167.0	167.4
8/17/2023	4	60	9.6		138		2		45		96		5			18		310		167.4	
8/17/2023	5	60	9.7		142		2		45		95		4			14		310		167.4	
8/17/2023	6	60	9.7		141		0		29		99		4			14		311		168.5	
8/17/2023	7	60	10.0		139		0		28		99		5	5		13	14	309	310	166.5	167.4
8/17/2023	8	60	9.8		138		0		37		100		5			14		310		167.2	
8/17/2023	9	60	9.6		140		1		51		98		5			12		310		166.9	
8/17/2023	10	60	9.8		139		2		53		97		7			13		310		167.3	
8/17/2023	11	60	9.9		141		2		43		95		6	6		13		309	310	166.9	167.1
8/17/2023	12	60	9.9		139		2		51		97		5			13		312		167.0	
8/17/2023	13	60	9.8		141		0		33		100		6			13		310		166.7	
8/17/2023	14	60	10.1		139		0		33		100		4			13		309		165.5	
8/17/2023	15	60	9.5		138		0		32		100		5	5		13	13	310	310	167.8	166.8
8/17/2023	16	60	9.8		141		1		41		97		6			14		311		167.7	
8/17/2023	17	60	9.5		139		4		71		94		5			14		311		167.9	
8/17/2023	18	60	9.6		135		1		49		98		10			13		311		167.8	
8/17/2023	19	60	9.6		141		0		57		100		5	7		13		305	310	166.9	167.6
8/17/2023	20	60	9.5		139		0		48		99		5			13		310		167.1	
8/17/2023	21	60	9.6		140		1		43		97		5			13		312		167.8	
8/17/2023	22	60	9.6		139		0		34		100		5			13		312		167.0	
8/17/2023	23	60	9.7		141		1		39		98		5	5		13	13	312	312	167.7	167.4

Average:
Geometric Mean Average:

Limit:

140	1	99
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean	≥ 80% Removal Efficiency

OR

see above
≤ 69 ppmc 4-HR Block Average

see above	see above	see above
≥ 12 lb/hr 8-HR. Block Average	≤ 345 °F 4-HR Block Average	≤ 173 klb/hr 4-HR Block Average

Status Flags

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 17-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	6	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-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	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