



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



Date 6/24/22

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.
6/24/2022	0	60	10.3		195		8		47		82		3			13		304		167.0	
6/24/2022	1	60	10.2		198		17		59		71		3			13		301		167.0	
6/24/2022	2	60	10.3		199		16		49		67		3			13		309		168.2	
6/24/2022	3	60	10.3		197		10		44		78		4	3		13		310	306	166.5	167.2
6/24/2022	4	60	10.3		196		13		36		64		3			13		310		165.9	
6/24/2022	5	60	10.2		197		8		24		66		4			13		312		165.7	
6/24/2022	6	60	10.1		200		8		24		65		4			13		315		166.6	
6/24/2022	7	60	10.2		195		21		30		30		5	4		13	13	320	314	166.1	166.1
6/24/2022	8	60	10.3		181		18		49		64		6			13		317		168.4	
6/24/2022	9	60	10.4		194		6		40		86		4			13		303		168.9	
6/24/2022	10	60	10.4		199		18		83		79		5			13		304		164.3	
6/24/2022	11	60	10.3		198		13		51		74		5	5		14		306	307	166.2	167.0
6/24/2022	12	60	10.1		198		11		52		79		5			13		318		169.1	
6/24/2022	13	60	10.3		197		9		41		77		4			13		316		167.1	
6/24/2022	14	60	10.4		198		17		53		68		4			13		309		166.4	
6/24/2022	15	60	10.7		200		24		63		61		4	4		13	13	309	313	164.6	166.8
6/24/2022	16	60	10.7		198		26		86		70		5			13		309		166.8	
6/24/2022	17	60	10.5		199		24		67		65		4			13		310		169.1	
6/24/2022	18	60	10.3		186		19		70		72		4			13		309		168.6	
6/24/2022	19	60	10.1		189		15		55		72		4	4		13		309	309	167.4	168.0
6/24/2022	20	60	10.2		199		19		54		66		4			13		309		168.4	
6/24/2022	21	60	10.1		195		13		44		70		4			13		309		168.2	
6/24/2022	22	60	10.3		198		18		52		66		3			13		309		167.5	
6/24/2022	23	60	10.2		199		24		71		67		4	4		13	13	309	309	169.0	168.3

Average:
Geometric Mean Average:

Limit:

196	15
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

71
≥ 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 6/24/22

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.
6/24/2022	0	60	10.0		181		4		11		64		0			13		313		166.8	
6/24/2022	1	60	10.2		178		7		11		36		0			13		314		168.6	
6/24/2022	2	60	10.3		175		3		10		67		1			13		319		167.2	
6/24/2022	3	60	10.0		181		1		12		95		1	I		13		316	316	168.2	167.7
6/24/2022	4	60	10.0		175		2		13		82		3			13		311		167.5	
6/24/2022	5	60	9.8		172		5		17		72		1			13		312		168.6	
6/24/2022	6	60	10.0		176		1		7		90		2			13		311		163.2	
6/24/2022	7	60	9.8		184		10		14		27		3	I		13	13	313	312	165.5	166.2
6/24/2022	8	60	10.1		174		4		13		72		4			13		318		167.3	
6/24/2022	9	60	9.9		168		0		14		99		2			13		310		168.0	
6/24/2022	10	60	9.7		178		3		25		88		3			13		309		167.6	
6/24/2022	11	60	9.8		170		2		16		85		3	I		13		311	312	167.8	167.7
6/24/2022	12	60	9.9		190		0		20		100		2			13		305		167.2	
6/24/2022	13	60	9.9		178		0		17		99		1			13		305		167.7	
6/24/2022	14	60	10.2		176		11		24		55		1			14		302		168.6	
6/24/2022	15	60	10.2		186		28		28		2		1	I		13	13	300	303	166.7	167.6
6/24/2022	16	60	10.1		189		20		41		53		2			13		307		168.1	
6/24/2022	17	60	10.2		192		24		60		61		2			13		310		167.9	
6/24/2022	18	60	10.0		186		8		32		75		1			13		310		167.8	
6/24/2022	19	60	9.8		193		2		21		90		2	I		13		312	309	167.6	167.9
6/24/2022	20	60	10.0		188		2		23		90		1			13		310		166.7	
6/24/2022	21	60	10.1		187		2		19		91		3			13		305		168.1	
6/24/2022	22	60	10.0		188		5		25		78		2			13		305		169.3	
6/24/2022	23	60	10.2		193		9		34		73		2	I		13	13	306	307	165.3	167.3

Average: Geometric Mean Average:	182	3	OR	86	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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 24-Jun-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	2	2	2	2	2	2	2	2	2	2	2
1	2	2	2	2	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	IC	6	IC	2	2	2	2	2	2	3
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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 24-Jun-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	0	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	0	1	1	1	1	1	1
3	1	1	1	1	1	1	1	1	1	1	1
4	1	1	1	1	1	0	1	0	1	0	1
5	1	1	1	1	1	1	0	0	0	1	0
6	2	IBC	5	IBC	1	0	1	1	1	1	1
7	1	1	1	1	1	0	0	1	1	0	1
8	1	1	1	1	1	1	0	1	1	1	1
9	1	0	1	1	1	0	0	0	0	0	0
10	0	0	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	0	0	1	1
17	0	0	0	0	0	1	1	0	0	1	0
18	1	0	0	0	0	1	1	1	1	1	0
19	0	1	1	0	0	1	1	1	1	1	1
20	1	1	1	1	1	0	1	1	1	0	1
21	1	1	1	1	1	0	0	1	0	0	0
22	1	1	1	1	1	0	1	1	1	0	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