



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



Date 6/10/22

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.
6/10/2022	0	60	9.8		177		25		95		73		3			14		304		168.5	
6/10/2022	1	60	10.0		182		20		64		69		3			13		304		165.9	
6/10/2022	2	60	9.8		187		18		58		70		3			14		305		165.0	
6/10/2022	3	60	9.6		190		20		73		72		3	3		15		305	304	168.3	166.9
6/10/2022	4	60	9.7		187		19		63		69		4			14		304		168.6	
6/10/2022	5	60	9.7		180		16		31		50		3			13		304		165.6	
6/10/2022	6	60	9.6		185		17		40		57		3			13		305		164.5	
6/10/2022	7	60	9.5		186		20		69		71		4	4		13	14	304	304	165.6	166.1
6/10/2022	8	60	9.8		181		23		61		62		4			13		304		162.6	
6/10/2022	9	60	9.9		175		25		74		66		4			13		304		166.1	
6/10/2022	10	60	9.9		195		21		58		64		4			14		304		167.6	
6/10/2022	11	60	10.1		194		21		72		71		3	4		13		304	304	166.4	165.7
6/10/2022	12	60	10.0		193		16		60		74		5			13		305		165.3	
6/10/2022	13	60	9.9		193		25		97		74		6			14		305		166.9	
6/10/2022	14	60	10.1		188		21		113		82		5			14		304		166.8	
6/10/2022	15	60	9.9		194		24		127		81		4	5		13	13	304	304	165.3	166.1
6/10/2022	16	60	10.0		191		22		114		81		5			14		305		164.7	
6/10/2022	17	60	10.2		177		24		127		81		4			13		304		162.0	
6/10/2022	18	60	10.2		190		22		119		81		4			13		304		163.3	
6/10/2022	19	60	10.0		197		23		95		76		4	5		14		305	304	165.8	163.9
6/10/2022	20	60	10.1		194		20		94		79		4			14		304		167.5	
6/10/2022	21	60	10.0		195		22		105		79		4			13		305		164.8	
6/10/2022	22	60	10.0		195		21		86		75		4			14		304		165.7	
6/10/2022	23	60	9.9		191		20		100		80		4	4		13	14	304	304	165.6	165.9

Average: Geometric Mean Average:	188	21	OR	73	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

- 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 6/10/22

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.
6/10/2022	0	60	10.2		195		26		61		57		0			14		305		167.4	
6/10/2022	1	60	10.1		196		23		40		42		0			14		305		167.5	
6/10/2022	2	60	10.0		196		22		32		31		0			14		310		168.2	
6/10/2022	3	60	10.0		197		22		30		25		0	0		15		311	308	167.7	167.7
6/10/2022	4	60	10.1		191		13		25		48		2			13		311		167.1	
6/10/2022	5	60	10.3		198		15		33		55		1			14		304		166.7	
6/10/2022	6	60	10.4		194		17		37		55		1			14		302		164.7	
6/10/2022	7	60	10.3		197		13		36		63		1	1		14	14	305	306	164.6	165.8
6/10/2022	8	60	10.6		195		14		24		43		3			14		305		163.8	
6/10/2022	9	60	10.6		191		23		36		36		2			14		305		164.5	
6/10/2022	10	60	10.3		199		14		28		51		1			14		307		166.0	
6/10/2022	11	60	10.3		198		14		22		34		2	2		14		315	308	165.5	164.9
6/10/2022	12	60	10.8		189		13		29		54		1			16		309		160.2	
6/10/2022	13	60	10.2		199		6		36		82		2			14		311		165.4	
6/10/2022	14	60	10.5		194		10		65		84		1			14		312		165.7	
6/10/2022	15	60	10.4		197		9		66		87		2	1		14	14	307	310	165.3	164.1
6/10/2022	16	60	10.2		200		9		63		86		3			14		313		165.8	
6/10/2022	17	60	10.1		198		13		59		78		2			14		315		165.5	
6/10/2022	18	60	10.1		195		14		56		76		2			14		314		165.8	
6/10/2022	19	60	10.2		198		7		47		85		2	2		14		306	312	165.3	165.6
6/10/2022	20	60	10.5		194		16		74		79		2			14		304		166.0	
6/10/2022	21	60	10.5		197		13		83		84		2			14		298		166.2	
6/10/2022	22	60	10.3		195		17		68		75		2			14		305		165.3	
6/10/2022	23	60	10.3		196		19		64		71		2	2		14	14	309	304	164.4	165.5

Average:
Geometric Mean Average:

Limit:

196	14
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

67
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≤ 12 8-HR. Block Average

lb/hr

see above
≤ 345 4-HR Block Average

°F

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 10-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 10-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	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	0	1	1	1	1	1	1	1	1	1	1
5	0	1	1	0	0	1	1	1	1	1	0
6	2	IBC	5	IBC	1	1	0	1	1	0	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