



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



Date 7/4/22

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.
7/4/2022	0	60	9.8		187		19		50		61		4			13		309		167.1	
7/4/2022	1	60	9.6		190		15		38		62		4			13		309		167.9	
7/4/2022	2	60	9.9		186		18		42		57		5			14		309		167.2	
7/4/2022	3	60	10.1		191		18		41		55		3	4		13		309	309	162.9	166.3
7/4/2022	4	60	9.9		183		24		55		57		4			24		310		165.0	
7/4/2022	5	60	10.0		197		23		50		55		4			23		309		165.6	
7/4/2022	6	60	9.8		192		19		55		65		4			24		310		166.9	
7/4/2022	7	60	10.0		192		22		55		60		4	4		23	18	309	309	162.5	165.0
7/4/2022	8	60	9.7		184		23		65		65		4			21		310		165.2	
7/4/2022	9	60	9.9		197		20		65		70		4			20		309		169.9	
7/4/2022	10	60	9.6		185		17		58		70		3			20		309		171.5	
7/4/2022	11	60	9.9		190		20		48		58		3	3		20		309	309	166.7	168.3
7/4/2022	12	60	9.5		185		15		44		67		3			20		310		173.1	
7/4/2022	13	60	9.8		190		13		32		60		3			20		309		167.2	
7/4/2022	14	60	10.0		191		19		37		48		3			19		309		165.5	
7/4/2022	15	60	9.9		183		15		36		58		3	3		15	19	310	309	164.3	167.5
7/4/2022	16	60	9.8		191		17		41		59		3			15		309		166.6	
7/4/2022	17	60	9.9		181		18		44		58		5			15		310		165.5	
7/4/2022	18	60	9.7		181		12		45		72		4			15		309		170.5	
7/4/2022	19	60	10.3		194		12		38		68		4	4		14		309	309	163.4	166.5
7/4/2022	20	60	10.2		194		19		40		52		3			14		309		165.6	
7/4/2022	21	60	9.8		187		20		47		59		3			14		309		170.8	
7/4/2022	22	60	10.2		185		23		50		54		4			14		309		167.7	
7/4/2022	23	60	10.2		188		19		46		58		4	4		14	14	309	309	163.6	166.9

Average: Geometric Mean Average:	188	18	OR	61	see above	see above	see above	see above
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% 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 7/4/22

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.
7/4/2022	0	0	20.9	IF	6	IF	6	IF	-82	IBF	0	IBF	0	IF		0		89		0.0	
7/4/2022	1	0	20.9	IF	7	IF	5	IF	-68	IBF	0	IBF	0	IF		0		90		0.0	
7/4/2022	2	46	16.9		112		5		2		0		32			5		121		0.0	
7/4/2022	3	60	16.6		116		6		2		0		15		24			140	130	1.8	0.9
7/4/2022	4	60	16.4		119		6		2		0		16			12		156		17.3	
7/4/2022	5	60	13.1		100		4		2		0		9			14		183		29.2	
7/4/2022	6	60	10.7		78		4		2		0		5			14		211		53.6	
7/4/2022	7	60	9.5		108		27		49		44		232		65	12		263	203	96.5	49.1
7/4/2022	8	60	10.5		196		30		57		48		11			15		301		160.8	
7/4/2022	9	60	12.3		190		8		52		85		30			15		287		129.7	
7/4/2022	10	60	10.3		195		20		62		68		15			15		301		168.1	
7/4/2022	11	60	10.6		197		19		51		63		9		16			305	299	165.9	156.1
7/4/2022	12	60	10.6		199		5		49		89		8			15		295		167.5	
7/4/2022	13	60	9.8		180		4		51		93		17			15		289		170.6	
7/4/2022	14	60	9.6		183		4		64		93		10			15		273		166.4	
7/4/2022	15	60	10.2		194		17		50		65		9		11	15		308	291	175.0	169.9
7/4/2022	16	60	10.5		189		4		39		91		7			15		301		163.6	
7/4/2022	17	60	10.4		190		14		48		71		8			15		310		167.0	
7/4/2022	18	60	10.2		188		11		40		73		8			14		312		171.3	
7/4/2022	19	60	10.6		188		19		48		60		8		8			307	308	172.6	168.6
7/4/2022	20	60	10.4		184		22		52		59		10			14		304		172.6	
7/4/2022	21	60	10.0		191		20		61		67		10			14		302		177.0	
7/4/2022	22	60	11.0		189		7		42		84		11			14		298		153.1	
7/4/2022	23	60	11.0		190		25		45		46		11		10	14	14	315	305	154.4	164.3

Average:
Geometric Mean Average:

Limit:

167	10
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

59
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 04-Jul-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 04-Jul-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	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
1	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
2	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	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	2	IBC	5	IBC	1		1		1		1		1		1		1		1		2
7	1		3		2		2		3		3		3		3		3		3		2
8	3		3		3		3		3		3		3		3		3		3		3
9	3		2		2		2		2		3		4		3		4		3		3
10	3		3		3		3		3		3		3		3		3		3		3
11	3		2		3		3		3		3		3		3		4		3		3
12	4		3		3		3		3		3		3		3		3		3		3
13	3		3		3		2		3		2		3		3		3		2		3
14	3		4		4		4		4		4		4		4		4		4		4
15	3		4		3		3		3		3		3		3		3		3		3
16	3		3		3		3		3		3		3		3		3		3		3
17	3		3		3		3		3		4		3		3		3		4		3
18	3		3		3		3		3		2		3		3		3		2		3
19	3		3		3		3		3		3		2		3		3		3		3
20	3		3		3		3		3		3		3		3		3		3		3
21	2		3		4		3		3		3		3		3		3		3		3
22	4		4		4		3		3		3		3		3		3		3		3
23	3		3		3		3		3		4		3		3		3		4		3

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