



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



Date 8/7/22

Wheel Plant Wheelabrator North Andover
Unit 1 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.
8/7/2022	0	60	10.0		173		16		63		74		3			13		310		161.7	
8/7/2022	1	60	9.9		166		10		70		85		3			13		301		163.6	
8/7/2022	2	60	9.8		188		17		72		76		3			13		303		166.1	
8/7/2022	3	60	9.8		181		12		54		78		3	3		13		307	305	166.2	164.4
8/7/2022	4	60	9.8		186		13		54		76		3			13		306		165.3	
8/7/2022	5	60	9.6		180		14		46		68		3			13		309		166.1	
8/7/2022	6	60	9.6		170		11		46		76		4			13		311		166.0	
8/7/2022	7	60	9.7		171		14		58		75		4	4		13	13	307	308	169.4	166.7
8/7/2022	8	60	9.9		179		18		73		75		4			13		305		166.8	
8/7/2022	9	60	9.7		185		22		87		74		4			13		309		169.3	
8/7/2022	10	60	9.9		179		21		77		73		4			13		304		165.4	
8/7/2022	11	60	9.5		173		18		77		77		5	4		13		306	306	168.2	167.4
8/7/2022	12	60	10.0		183		20		64		69		4			13		309		165.0	
8/7/2022	13	60	9.6		180		22		66		68		3			14		319		166.8	
8/7/2022	14	60	10.0		177		20		64		68		3			13		318		165.7	
8/7/2022	15	60	9.6		165		17		66		75		3	3		13	13	313	315	167.6	166.3
8/7/2022	16	60	9.8		180		17		69		75		3			13		304		166.5	
8/7/2022	17	60	9.8		184		21		67		68		3			13		311		164.6	
8/7/2022	18	60	9.7		185		18		53		67		4			13		316		166.7	
8/7/2022	19	60	9.9		172		7		60		88		5	4		13		305	309	157.7	163.9
8/7/2022	20	60	9.6		183		15		54		71		3			13		319		167.3	
8/7/2022	21	60	9.8		184		11		54		79		4			13		314		165.9	
8/7/2022	22	60	9.7		188		10		57		82		4			13		307		166.2	
8/7/2022	23	60	9.8		183		10		60		84		4	4		13	13	307	312	164.5	166.0

Average:
Geometric Mean Average:

Limit:

179	15
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

76
≥ 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 8/7/22

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.
8/7/2022	0	60	10.2		161		16		46		65		3			14		318		164.6	
8/7/2022	1	60	10.4		166		19		51		62		2			13		313		163.6	
8/7/2022	2	60	10.3		151		20		51		60		2			14		315		166.9	
8/7/2022	3	60	10.4		151		8		31		75		2	2		14		316	316	163.4	164.6
8/7/2022	4	60	10.3		167		9		26		66		3			14		318		164.5	
8/7/2022	5	60	10.3		172		8		25		69		3			14		314		166.1	
8/7/2022	6	60	10.2		169		14		38		64		3			14		313		168.8	
8/7/2022	7	60	9.8		183		11		48		77		2	3		14	14	311	314	167.5	166.7
8/7/2022	8	60	9.4		187		12		57		79		3			14		311		172.7	
8/7/2022	9	60	10.4		166		12		46		73		4			14		311		161.8	
8/7/2022	10	60	9.6		187		22		61		63		2			14		318		174.5	
8/7/2022	11	60	10.5		197		17		43		60		3	3		13		316	314	161.2	167.5
8/7/2022	12	60	9.6		195		19		52		65		3			14		320		172.1	
8/7/2022	13	60	9.8		196		10		31		69		2			14		316		172.1	
8/7/2022	14	60	10.3		197		7		27		72		2			14		310		169.2	
8/7/2022	15	60	10.2		197		18		43		58		3	3		14	14	316	316	168.5	170.5
8/7/2022	16	60	10.0		190		16		48		68		2			13		315		173.2	
8/7/2022	17	60	10.4		169		8		53		85		3			14		305		159.2	
8/7/2022	18	60	10.6		172		13		43		70		3			14		307		157.2	
8/7/2022	19	60	10.1		171		13		49		73		3	3		14		317	311	161.6	162.8
8/7/2022	20	60	10.3		178		5		47		90		3			14		309		162.0	
8/7/2022	21	60	10.7		176		3		39		93		3			13		302		154.8	
8/7/2022	22	60	10.9		183		7		40		82		3			14		313		157.7	
8/7/2022	23	60	10.8		176		5		38		86		2	3		13	14	313	309	154.9	157.3

Average:
Geometric Mean Average:

Limit:

177	11
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

74
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≥ 12 8-HR. Block Average

see above
≤ 345 °F 4-HR Block Average

see above
≤ 173 4-HR Block Average

klb/hr

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 07-Aug-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	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	2	IC	5	IC	1	1	1	1	1	1	2
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 07-Aug-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	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	1	1	1	0	0
6	2	IBC	5	IBC	0	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	0	1	1	1	1
11	1	1	1	1	0	1	1	1	1	1	0
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	0	1	1	1	1	1	1
15	1	1	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	1	1	1	0	0
17	0	0	1	0	0	0	1	1	0	0	0
18	1	1	1	1	1	1	1	1	0	1	1
19	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	1	0	1	1	1	1	1	0
21	1	1	1	0	0	1	0	0	0	1	0
22	0	0	0	0	1	1	1	0	1	1	0
23	1	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