



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



Date 8/21/22

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.
8/21/2022	0	60	10.4		180		23		85		73		6			14		318		164.5	
8/21/2022	1	60	10.3		186		23		83		72		3			14		320		165.9	
8/21/2022	2	60	10.3		183		18		72		75		3			14		313		165.6	
8/21/2022	3	60	10.3		175		26		90		71		4	4		14		313	316	165.9	165.5
8/21/2022	4	60	10.2		170		16		74		78		11			13		310		165.3	
8/21/2022	5	60	10.1		184		23		78		70		5			14		309		166.4	
8/21/2022	6	60	10.1		183		20		69		71		4			14		312		167.3	
8/21/2022	7	60	10.1		175		22		80		72		4	6		13	14	312	311	165.8	166.2
8/21/2022	8	60	10.1		161		16		77		79		4			13		306		167.7	
8/21/2022	9	60	10.4		164		12		74		84		4			13		293		157.5	
8/21/2022	10	60	10.3		177		20		67		70		3			14		313		166.7	
8/21/2022	11	60	10.3		171		19		62		70		4	4		14		300	303	165.4	164.3
8/21/2022	12	60	10.4		179		25		70		64		3			14		303		166.1	
8/21/2022	13	60	10.4		177		29		88		67		4			14		306		167.0	
8/21/2022	14	60	10.3		175		25		71		65		3			14		305		167.3	
8/21/2022	15	60	10.4		177		26		78		66		4	4		14	14	307	305	165.7	166.5
8/21/2022	16	60	10.7		169		21		65		68		10			14		306		160.2	
8/21/2022	17	60	10.7		166		21		60		65		3			14		301		162.8	
8/21/2022	18	60	10.5		171		21		62		67		3			14		303		164.1	
8/21/2022	19	60	10.4		169		16		54		70		3	5		14		298	302	163.5	162.6
8/21/2022	20	60	10.1		159		13		53		75		3			14		296		167.1	
8/21/2022	21	60	10.1		164		21		43		50		3			14		310		165.0	
8/21/2022	22	60	10.1		164		21		46		55		4			14		316		164.1	
8/21/2022	23	60	10.1		162		23		49		53		3	3		14	14	315	309	163.4	164.9

Average:
Geometric Mean Average:

Limit:

172	20
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

70
≥ 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 8/21/22

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.
8/21/2022	0	60	10.7		186		17		51		67		3			14		310		165.8	
8/21/2022	1	60	10.6		182		14		56		75		3			14		310		167.2	
8/21/2022	2	60	10.7		187		11		48		77		3			14		310		164.6	
8/21/2022	3	60	10.7		184		17		73		77		2	3		14		310	310	167.1	166.2
8/21/2022	4	60	10.5		181		23		75		69		4			14		315		166.6	
8/21/2022	5	60	10.1		171		18		67		74		4			14		313		169.1	
8/21/2022	6	60	10.3		179		19		65		70		4			14		310		168.5	
8/21/2022	7	60	10.3		177		15		55		73		3	4		14	14	310	312	166.4	167.6
8/21/2022	8	60	10.4		177		15		61		76		2			14		309		166.6	
8/21/2022	9	60	10.4		166		10		61		84		2			14		310		166.4	
8/21/2022	10	60	10.4		169		14		55		74		3			14		305		167.3	
8/21/2022	11	60	10.0		163		18		67		73		2	2		14		310	308	169.5	167.4
8/21/2022	12	60	10.6		176		18		56		67		3			14		310		165.4	
8/21/2022	13	60	10.4		167		21		74		72		3			14		309		168.6	
8/21/2022	14	60	10.3		173		21		66		68		2			14		310		167.2	
8/21/2022	15	60	10.4		167		38		94		60		105	28		14	14	310	310	177.0	169.6
8/21/2022	16	60	10.8		166		20		42		54		3			14		310		161.3	
8/21/2022	17	60	10.7		179		15		44		65		2			14		311		167.3	
8/21/2022	18	60	10.7		171		17		50		66		2			14		311		165.8	
8/21/2022	19	60	10.8		167		20		49		60		2	2		14		321	313	164.4	164.7
8/21/2022	20	60	10.6		172		26		48		45		2			14		328		166.5	
8/21/2022	21	60	10.5		175		25		42		40		2			14		329		166.2	
8/21/2022	22	60	10.7		175		21		46		55		3			15		321		166.8	
8/21/2022	23	60	10.5		173		21		72		70		3	3		14	14	307	321	165.7	166.3

Average:
Geometric Mean Average:

Limit:

174	18
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

68
≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

see above
≥ 12 lb/hr 8-HR. Block Average

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see above
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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 21-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	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 21-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	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	IBC	5	IBC	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
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