



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



Date 8/17/22

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.
8/17/2022	0	60	9.9		176		7		41		83		4			14		303		164.3	
8/17/2022	1	60	10.0		186		11		52		78		3			14		300		163.5	
8/17/2022	2	60	9.7		180		12		47		75		3			13		303		165.5	
8/17/2022	3	60	10.1		176		5		35		86		3	3		14		304	302	164.1	164.4
8/17/2022	4	60	9.9		171		3		29		90		3			14		303		164.7	
8/17/2022	5	60	9.7		168		3		28		90		4			13		306		164.6	
8/17/2022	6	60	9.6		164		5		38		86		4			13		307		166.9	
8/17/2022	7	60	10.0		171		3		24		86		3	3		14	14	304	305	166.1	165.6
8/17/2022	8	60	10.3		162		2		23		91		3			13		298		162.5	
8/17/2022	9	60	10.2		174		6		39		86		4			14		303		162.9	
8/17/2022	10	60	10.4		191		10		39		75		3			14		309		166.3	
8/17/2022	11	60	10.2		182		8		52		85		4	4		14		309	305	164.4	164.0
8/17/2022	12	60	9.8		182		6		33		82		5			14		312		165.5	
8/17/2022	13	60	10.1		175		58		134		57		4			14		308		164.6	
8/17/2022	14	60	9.8		181		31		132		77		5			13		305		164.2	
8/17/2022	15	60	9.5		180		3		34		92		4	5		14	14	304	307	165.0	164.8
8/17/2022	16	60	9.6		176		1		27		97		4			14		305		164.5	
8/17/2022	17	60	9.7		164		2		34		94		4			14		303		164.8	
8/17/2022	18	60	9.8		161		2		50		96		4			14		296		163.5	
8/17/2022	19	60	9.9		176		2		43		95		3	4		14		287	298	165.5	164.6
8/17/2022	20	60	9.6		171		3		36		92		4			14		287		166.7	
8/17/2022	21	60	9.7		171		3		38		91		4			14		288		163.2	
8/17/2022	22	60	9.7		175		28		99		71		4			14		296		165.5	
8/17/2022	23	60	9.7		162		13		65		80		4	4		14	14	296	292	163.7	164.8

Average:
Geometric Mean Average:

Limit:

174	5
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

87
≥ 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 8/17/22

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.
8/17/2022	0	60	10.3		164		8		32		76		5			14		309		165.4	
8/17/2022	1	60	10.9		164		5		30		83		40			14		307		161.3	
8/17/2022	2	60	10.5		158		3		25		88		5			14		301		160.0	
8/17/2022	3	60	10.5		159		6		31		79		5	14		14		315	308	166.2	163.2
8/17/2022	4	60	10.5		162		6		30		81		5			14		309		165.1	
8/17/2022	5	60	10.4		165		5		17		72		4			14		315		165.7	
8/17/2022	6	60	10.4		161		5		17		73		4			14		317		166.4	
8/17/2022	7	60	10.5		162		3		13		81		4	4		14	14	317	314	163.6	165.2
8/17/2022	8	60	10.6		157		13		42		70		4			14		320		166.7	
8/17/2022	9	60	11.1		169		5		30		83		6			14		314		156.8	
8/17/2022	10	60	10.6		162		5		27		83		6			14		311		163.3	
8/17/2022	11	60	10.6		166		5		40		87		6	6		14		310	314	165.1	163.0
8/17/2022	12	60	10.4		163		4		30		87		5			14		310		165.4	
8/17/2022	13	60	10.8		167		8		52		84		5			14		310		164.9	
8/17/2022	14	60	10.6		163		14		76		82		5			14		310		165.1	
8/17/2022	15	60	10.4		164		4		33		89		5	5		14	14	310	310	166.2	165.4
8/17/2022	16	60	10.4		165		3		21		88		4			14		310		165.6	
8/17/2022	17	60	10.8		154		3		28		90		4			13		310		165.3	
8/17/2022	18	60	10.8		156		8		45		83		5			14		310		164.4	
8/17/2022	19	60	10.7		156		7		26		73		4	4		14		310	310	166.5	165.4
8/17/2022	20	60	10.7		162		9		27		67		3			14		310		165.3	
8/17/2022	21	60	10.7		166		12		31		62		3			14		310		165.9	
8/17/2022	22	60	10.8		164		22		58		62		4			14		310		165.3	
8/17/2022	23	60	10.7		161		26		48		45		4	4		14	14	310	310	165.4	165.5

Average:
Geometric Mean Average:

Limit:

162	6
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

80
≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 17-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 17-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
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown