



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



Date 8/11/22

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.
8/11/2022	0	60	9.2		161		19		58		68		4			14		312		165.7	
8/11/2022	1	60	9.3		165		20		72		73		3			14		313		164.5	
8/11/2022	2	60	9.3		161		21		81		74		3			14		312		165.4	
8/11/2022	3	60	9.2		159		21		73		71		3	3		14		316	313	164.8	165.1
8/11/2022	4	60	9.0		154		17		74		77		3			14		315		164.7	
8/11/2022	5	60	9.3		159		19		60		69		3			14		310		164.2	
8/11/2022	6	60	9.1		163		15		39		63		4			14		312		166.3	
8/11/2022	7	60	9.2		162		6		29		78		4	3		14	14	314	313	165.0	165.0
8/11/2022	8	60	9.1		156		3		42		94		4			14		309		165.7	
8/11/2022	9	60	9.8		172		8		84		91		4			14		300		164.3	
8/11/2022	10	60	9.7		176		7		81		91		4			15		299		165.7	
8/11/2022	11	60	9.8		177		20		79		75		3	4		15		310	304	165.1	165.2
8/11/2022	12	60	9.6		167		22		90		75		5			15		312		164.4	
8/11/2022	13	60	9.6		170		14		75		81		4			15		308		166.2	
8/11/2022	14	60	9.6		162		5		33		84		3			15		305		165.5	
8/11/2022	15	60	10.0		144		4		35		90		6	5		15	15	296	305	168.4	166.1
8/11/2022	16	60	9.8		171		6		39		84		3			15		302		162.7	
8/11/2022	17	60	9.8		184		17		48		64		5			14		324		162.4	
8/11/2022	18	60	9.7		175		8		54		84		5			16		304		165.4	
8/11/2022	19	60	9.6		192		12		43		72		4	4		14		311	310	166.0	164.2
8/11/2022	20	60	9.7		191		14		50		71		4			14		314		165.1	
8/11/2022	21	60	9.8		186		14		53		74		4			13		314		162.9	
8/11/2022	22	60	9.5		190		11		43		73		5			13		318		164.9	
8/11/2022	23	60	9.5		186		8		35		76		4	4		13	14	321	317	165.5	164.6

Average:
Geometric Mean Average:

Limit:

170	11
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

79
≥ 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 8/11/22

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.
8/11/2022	0	60	10.5		177		32		67		52		3			14		313		166.5	
8/11/2022	1	60	10.5		181		15		67		78		2			14		315		165.4	
8/11/2022	2	60	10.3		180		12		63		80		2			15		312		166.2	
8/11/2022	3	60	10.5		174		10		66		84		2	2		13		308	312	164.7	165.7
8/11/2022	4	60	10.3		180		8		49		83		4			14		307		165.6	
8/11/2022	5	60	10.4		172		6		23		71		4			13		308		165.9	
8/11/2022	6	60	10.6		168		21		33		36		32			13		310		171.2	
8/11/2022	7	60	10.4		177		13		51		75		4	11		15	14	301	307	162.8	166.4
8/11/2022	8	60	10.1		171		40		129		69		5			13		312		165.0	
8/11/2022	9	60	10.6		167		35		120		71		108			14		315		165.3	
8/11/2022	10	60	10.6		167		4		37		90		25			14		306		155.4	
8/11/2022	11	60	10.2		158		6		56		89		5	36		13		305	310	159.9	161.4
8/11/2022	12	60	10.0		173		11		50		77		4			13		320		166.3	
8/11/2022	13	60	10.2		170		4		46		92		3			14		309		164.6	
8/11/2022	14	60	10.0		159		4		30		88		3			12		308		166.4	
8/11/2022	15	60	10.2		165		3		40		94		4	3		13	14	299	309	164.4	165.4
8/11/2022	16	60	10.0		173		3		23		89		5			15		302		165.5	
8/11/2022	17	60	10.2		173		6		37		85		5			18		309		164.6	
8/11/2022	18	60	10.1		168		9		39		77		4			16		311		165.8	
8/11/2022	19	60	10.1		168		6		32		81		4	5		15		314	309	166.1	165.5
8/11/2022	20	60	9.8		163		6		40		85		3			15		313		167.3	
8/11/2022	21	60	9.8		172		15		60		75		4			15		317		172.4	
8/11/2022	22	60	10.2		159		17		57		71		4			15		319		165.6	
8/11/2022	23	60	9.9		161		5		30		84		4	4		15	15	325	318	166.2	167.9

Average:
Geometric Mean Average:

Limit:

170	9
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

81
≥ 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 11-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 11-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	1	1	0	0	0	0	0	0	0	0	0
2	0	1	1	0	1	0	0	0	0	0	0
3	0	0	0	1	1	0	1	0	1	0	0
4	0	1	0	1	1	1	1	1	1	1	0
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

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I - Invalid C - Calibration F - Offline T - Out of Control ^ - Startup
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown