



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



Date 9/11/22

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.
9/11/2022	0	60	10.5		197		7		54		88		5			14		313		165.7	
9/11/2022	1	60	10.4		193		2		42		96		5			14		305		161.9	
9/11/2022	2	60	10.3		190		3		58		95		6			14		304		165.9	
9/11/2022	3	60	10.2		188		1		50		99		5	5		14		297	305	166.0	164.9
9/11/2022	4	60	10.3		190		1		36		98		5			14		300		165.9	
9/11/2022	5	60	10.1		189		1		37		97		5			14		304		167.2	
9/11/2022	6	60	10.2		194		3		40		93		5			14		304		167.3	
9/11/2022	7	60	10.4		191		6		51		88		5	5		14	14	302	302	165.4	166.5
9/11/2022	8	60	10.3		192		6		52		89		5			13		304		165.9	
9/11/2022	9	60	10.4		193		5		46		90		5			14		304		165.0	
9/11/2022	10	60	10.4		183		3		37		92		5			14		306		166.1	
9/11/2022	11	60	10.5		176		2		43		95		4	5		14		298	303	166.7	165.9
9/11/2022	12	60	10.5		191		4		40		91		5			14		305		165.0	
9/11/2022	13	60	10.5		194		8		43		81		5			14		312		166.8	
9/11/2022	14	60	10.7		189		7		47		85		5			14		311		165.3	
9/11/2022	15	60	10.6		189		7		39		81		5	5		14	14	313	310	163.7	165.2
9/11/2022	16	60	10.4		183		11		41		74		4			14		315		169.0	
9/11/2022	17	60	10.6		190		7		33		78		5			14		314		164.6	
9/11/2022	18	60	10.5		187		3		31		89		5			14		311		165.5	
9/11/2022	19	60	10.7		189		4		35		90		4	5		14		303	311	165.2	166.1
9/11/2022	20	60	10.6		192		3		32		90		5			14		304		164.2	
9/11/2022	21	60	10.8		185		6		38		84		5			14		305		163.1	
9/11/2022	22	60	10.7		141		12		43		73		6			14		312		165.1	
9/11/2022	23	60	10.7		141		11		44		75		6	5		14	14	306	307	165.7	164.5

Average:
Geometric Mean Average:

Limit:

185	4
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

91
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average ppmc

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

see above
≤ 345 °F 4-HR Block Average

see above
≤ 173 4-HR Block Average klb/hr

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 9/11/22

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.
9/11/2022	0	60	10.8		173		3		23		86		4			14		317		158.6	
9/11/2022	1	60	10.7		177		4		27		86		5			14		320		164.7	
9/11/2022	2	60	10.6		172		3		24		86		5			14		317		165.3	
9/11/2022	3	60	10.7		174		3		16		82		5	4		14		314	317	164.9	163.4
9/11/2022	4	60	10.7		172		3		12		77		6			14		306		164.6	
9/11/2022	5	60	10.6		174		3		9		70		5			14		309		167.0	
9/11/2022	6	60	10.8		175		3		8		66		5			14		304		165.6	
9/11/2022	7	60	10.8		178		5		15		69		6	5		14	14	301	305	165.4	165.6
9/11/2022	8	60	10.8		171		7		17		62		5			14		311		165.8	
9/11/2022	9	60	10.8		171		5		17		68		4			14		312		164.8	
9/11/2022	10	60	10.8		162		3		12		75		4			14		308		164.9	
9/11/2022	11	60	10.7		154		5		19		75		5	5		14		313	311	167.5	165.7
9/11/2022	12	60	10.8		164		3		16		82		4			13		302		164.0	
9/11/2022	13	60	10.7		155		4		23		84		6			14		304		166.0	
9/11/2022	14	60	10.9		162		4		20		81		6			14		307		163.7	
9/11/2022	15	60	10.7		158		4		16		78		5	5		14	14	313	306	166.0	164.9
9/11/2022	16	60	11.0		158		4		16		77		6			14		312		164.2	
9/11/2022	17	60	10.8		153		4		17		76		7			14		316		166.2	
9/11/2022	18	60	10.7		163		5		18		72		13			14		318		167.5	
9/11/2022	19	60	10.9		171		4		15		74		5	8		14		316	316	165.1	165.7
9/11/2022	20	60	10.8		166		3		17		84		4			14		307		165.1	
9/11/2022	21	60	10.8		165		3		21		84		4			14		305		165.0	
9/11/2022	22	60	10.8		141		4		21		81		5			14		306		164.7	
9/11/2022	23	60	10.8		138		7		26		72		5	5		14	14	311	307	167.1	165.5

Average:
Geometric Mean Average:

Limit:

165	4
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

78
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average ppmc

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

see above
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see above
≤ 173 4-HR Block Average klb/hr

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 11-Sep-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	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	0	0	0	0	0
6	3	IC	5	IC	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	1	1	0	1	1	0	0	0
9	1	1	0	1	1	1	1	1	1	1	0
10	1	1	1	1	1	1	1	1	1	1	1
11	0	1	1	0	1	0	0	1	1	0	0
12	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0
23	0	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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 11-Sep-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