



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



Date 5/14/22

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.
5/14/2022	0	60	10.0	IBM	147	IBM	2	IBM	38		96	IBM	7	IBM		13		303		163.8	
5/14/2022	1	60	10.4		151		5		44		88		7			14		300		166.2	
5/14/2022	2	60	10.5		160		8		43		81		7			13		308		166.3	
5/14/2022	3	60	10.4		165		9		36		75		7	7		13		311	305	166.6	165.7
5/14/2022	4	60	10.2		157		14		42		67		7			13		311		169.6	
5/14/2022	5	60	10.4		160		14		49		71		7			13		308		168.4	
5/14/2022	6	60	10.0		153		8		42		81		6			14		304		166.9	
5/14/2022	7	60	10.1		159		6		37		84		8	7		13	13	307	308	165.7	167.6
5/14/2022	8	60	9.8		149		3		40		92		7			13		303		166.0	
5/14/2022	9	60	10.0		157		10		44		77		6			14		305		164.9	
5/14/2022	10	60	10.6		147		6		47		88		11			13		304		152.3	
5/14/2022	11	60	10.3		168		6		36		82		6	8		13		304	304	166.1	162.3
5/14/2022	12	60	10.2		172		13		41		68		6			13		310		165.2	
5/14/2022	13	60	10.3		168		14		46		70		6			14		307		165.8	
5/14/2022	14	60	10.2		170		21		45		52		6			14		313		166.8	
5/14/2022	15	60	10.3		174		15		37		60		6	6		14	14	311	310	166.0	166.0
5/14/2022	16	60	10.3		164		17		34		49		6			13		310		167.0	
5/14/2022	17	60	10.6		160		5		42		87		7			13		297		160.9	
5/14/2022	18	60	10.4		168		19		56		66		6			13		300		164.3	
5/14/2022	19	60	10.3		166		11		39		71		6	6		13		304	303	164.3	164.1
5/14/2022	20	60	10.3		161		13		39		66		6			13		308		165.1	
5/14/2022	21	60	10.3		164		12		39		69		5			13		308		165.2	
5/14/2022	22	60	10.3		168		23		43		47		6			13		315		166.9	
5/14/2022	23	60	10.3		154		20		37		45		6	6		13	13	312	311	165.1	165.6

Average:
Geometric Mean Average:

Limit:

162	11
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

74
≥ 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 5/14/22

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.
5/14/2022	0	60	10.1		185		0		55		100		2			15		310		166.3	
5/14/2022	1	60	10.1		182		2		56		97		2			15		310		167.7	
5/14/2022	2	60	10.1		183		1		58		99		1			15		310		168.3	
5/14/2022	3	60	10.1		188		1		57		98		1	2		14		310	310	166.8	167.3
5/14/2022	4	60	9.7		172		1		54		98		2			14		310		169.0	
5/14/2022	5	60	9.7		184		4		65		94		1			15		310		167.0	
5/14/2022	6	60	9.4		172		7		74		90		2			14		310		169.0	
5/14/2022	7	60	9.7		186		3		54		94		2	2		14	15	310	310	166.5	167.9
5/14/2022	8	60	9.4		185		2		56		96		2			14		310		167.2	
5/14/2022	9	60	9.5		180		1		44		97		2			14		310		166.0	
5/14/2022	10	60	9.5		174		1		43		97		1			14		310		166.1	
5/14/2022	11	60	9.6		178		2		53		96		1	2		13		310	310	166.0	166.3
5/14/2022	12	60	9.7		175		3		58		95		4			13		310		165.6	
5/14/2022	13	60	9.7		171		4		70	IB	95	IB	2			14		310		167.2	
5/14/2022	14	60	9.7		176		4		126	IB	97	IB	2			14		310		166.5	
5/14/2022	15	60	9.3		182		3		641	IB	100	IB	1	2		14	14	310	310	167.6	166.7
5/14/2022	16	60	9.5		173		5		88	IB	94	IB	2			14		310		167.4	
5/14/2022	17	60	9.5		180		8		45		81		2			13		310		166.9	
5/14/2022	18	60	9.4		178		7		38		82		2			14		310		166.8	
5/14/2022	19	60	9.7		178		3		45	IBM	92	IBM	2	2		14		310	310	166.0	166.8
5/14/2022	20	60	9.7		179		1		49	IBM	97	IBM	1			14		310		164.7	
5/14/2022	21	60	9.8		183		4		57	IBM	93	IBM	2			14		310		166.7	
5/14/2022	22	60	9.8		186		3		52	IBM	93	IBM	2			14		310		165.3	
5/14/2022	23	60	9.8		184		5		49	IBM	90	IBM	2	2		14	14	310	310	165.1	165.4

Average:
Geometric Mean Average:

Limit:

180	2	OR	96
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

see above	see above	see above
≤ 12 lb/hr 8-HR. Block Average	≤ 345 °F 4-HR Block Average	≤ 173 klb/hr 4-HR Block Average

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 14-May-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	2	2	2	2	2	2	2	2	2	2	2
1	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2
3	2	2	2	2	2	2	2	2	2	2	2
4	2	2	2	2	2	2	2	2	2	2	2
5	2	2	2	2	2	2	2	2	2	2	2
6	2	IC	6	IC	2	2	2	2	2	2	2
7	2	2	2	2	2	2	2	2	2	2	2
8	2	2	2	2	2	2	2	2	2	2	2
9	2	2	2	2	2	2	2	2	2	2	2
10	2	2	2	2	2	2	2	2	2	2	2
11	2	2	2	2	2	2	2	2	2	2	2
12	2	2	2	2	2	2	2	2	2	2	2
13	2	2	2	2	2	2	2	2	2	2	2
14	2	2	2	2	2	2	2	2	2	2	2
15	2	2	2	2	2	2	2	2	2	2	2
16	2	2	2	2	2	2	2	2	2	2	2
17	2	2	2	2	2	2	2	2	2	2	2
18	2	2	2	2	2	2	2	2	2	2	2
19	2	2	2	2	2	2	2	2	2	2	2
20	2	2	2	2	2	2	2	2	2	2	2
21	2	2	2	2	2	2	2	2	2	2	2
22	2	2	2	2	2	2	2	2	2	2	2
23	2	2	2	2	2	2	2	2	2	2	2

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 14-May-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	0	0	0	0	0
6	2	IBC	4	IBC	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	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

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