



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



Date 8/16/22

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.
8/16/2022	0	60	9.7		188		15		68		78		4			15		311		163.5	
8/16/2022	1	60	9.6		188		22		72		69		3			17		320		166.1	
8/16/2022	2	60	9.6		188		15		43		65		3			1		319		165.9	
8/16/2022	3	60	9.6		179		5		33		86		4	3		17		313	316	164.4	165.0
8/16/2022	4	60	9.4		178		3		32		91		4			20		306		165.0	
8/16/2022	5	60	9.4		178		5		28		82		4			24		307		165.1	
8/16/2022	6	60	9.5		169		2		28		92		3			20		303		164.1	
8/16/2022	7	60	9.4		165		1		24		95		4	4		17	16	303	305	165.7	165.0
8/16/2022	8	60	9.7		187		15		36		58		4			16		303		165.9	
8/16/2022	9	60	9.7		191		25		82		70		3			16		316		166.4	
8/16/2022	10	60	9.8		186		11		55		81		3			13		303		166.3	
8/16/2022	11	49	9.8		191		15		43		65		3	3		14		308	307	165.6	166.0
8/16/2022	12	60	10.0		191		13		36		64		3			14		311		164.8	
8/16/2022	13	60	10.0		187		17		49		65		3			14		310		164.8	
8/16/2022	14	60	9.8		188		29		70		59		5			15		311		165.8	
8/16/2022	15	60	9.8		187		17		39		56		5	4		15	14	310	311	164.7	165.0
8/16/2022	16	60	9.9		179		10		46		77		5			15		303		163.2	
8/16/2022	17	60	9.8		195		21		34		39		5			15		312		166.4	
8/16/2022	18	60	9.8		194		18		41		55		5			15		315		164.8	
8/16/2022	19	60	9.6		196		15		36		59		4	5		15		319	312	166.2	165.1
8/16/2022	20	60	9.6		193		19		40		52		4			15		320		166.7	
8/16/2022	21	60	9.7		192		12		26		54		4			14		318		166.6	
8/16/2022	22	60	9.7		186		5		27		82		3			14		313		164.3	
8/16/2022	23	60	9.7		173		1		25		95		4	4		14	14	304	314	159.7	164.3

Average: Geometric Mean Average:	185	10	OR	75	see above	see above	see above	see above
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 ppmc 4-HR Block Average	≥ 12 lb/hr 8-HR. Block Average	≤ 345 °F 4-HR Block Average	≤ 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 8/16/22

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.
8/16/2022	0	60	10.5		168		8		45		83		3			14		313		164.7	
8/16/2022	1	60	10.4		167		8		42		80		3			14		316		166.3	
8/16/2022	2	60	10.5		166		9		35		75		2			14		321		165.8	
8/16/2022	3	60	10.4		161		4		29		85		3	3		14		316	316	166.6	165.9
8/16/2022	4	60	10.4		168		4		37		88		5			14		303		164.9	
8/16/2022	5	60	10.5		167		6		21		72		4			14		309		167.1	
8/16/2022	6	60	10.3		167		3		8		68		4			14		306		165.9	
8/16/2022	7	60	10.4		169		2		8		71		5	5		14	14	311	307	166.0	166.0
8/16/2022	8	60	10.5		168		5		12		60		5			15		308		165.7	
8/16/2022	9	60	10.3		163		10		30		68		4			15		302		164.8	
8/16/2022	10	60	10.4		165		5		31		85		4			15		303		165.6	
8/16/2022	11	59	10.2		162		2		20		88		3	4		15		301	303	165.8	165.5
8/16/2022	12	60	10.4		164		2		20		90		4			15		298		166.7	
8/16/2022	13	60	10.5		164		8		27		72		4			15		307		166.2	
8/16/2022	14	60	10.2		167		5		27		81		5			15		308		165.2	
8/16/2022	15	60	10.1		173		7		22		69		5	5		15	15	310	306	165.3	165.9
8/16/2022	16	60	10.3		172		18		34		48		7			14		312		165.6	
8/16/2022	17	60	10.3		174		14		26		47		6			14		311		166.2	
8/16/2022	18	60	10.2		174		16		24		34		7			14		313		166.1	
8/16/2022	19	60	10.3		173		8		20		58		6	6		15		315	313	165.3	165.8
8/16/2022	20	60	10.4		175		4		25		85		5			15		308		164.4	
8/16/2022	21	60	10.3		164		5		29		84		4			15		306		166.7	
8/16/2022	22	60	10.3		163		4		24		84		4			15		307		165.8	
8/16/2022	23	60	10.3		170		4		20		81		5	4		14	14	307	307	164.7	165.4

Average: Geometric Mean Average:	168	6	OR	76	see above	see above	see above	see above			
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 4-HR Block Average	ppmc	≥ 12 8-HR. Block Average	lb/hr	≤ 345 °F 4-HR Block Average	≤ 173 4-HR Block Average	klb/hr

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 16-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	I	0	I	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 16-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	0	1	1	0	0	0
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	0	0	1	1	1	1	1	1	0
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	I	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