



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



Date 12/17/22

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.
12/17/2022	0	60	10.5		193		6		51		89		5			13		309		165.2	
12/17/2022	1	60	10.6		197		5		49		90		5			13		309		164.8	
12/17/2022	2	60	10.7		198		13		65		80		5			13		309		165.0	
12/17/2022	3	60	10.6		198		15		70		79		5	5		13		309	309	166.3	165.3
12/17/2022	4	60	10.7		202		18		79		78		4			13		309		164.4	
12/17/2022	5	60	10.7		200		16		77		80		4			13		310		165.4	
12/17/2022	6	60	10.5		157		21		92		78		5			13		309		166.8	
12/17/2022	7	60	10.7		155		19		79		76		5	5		14	13	309	309	165.1	165.4
12/17/2022	8	60	10.7		156		12		49		75		4			14		310		165.7	
12/17/2022	9	60	10.9		155		19		63		70		4			13		309		165.4	
12/17/2022	10	60	10.8		159		20		72		72		4			13		309		166.2	
12/17/2022	11	60	10.8		169		14		44		69		5	4		13		309	309	167.7	166.2
12/17/2022	12	60	10.9		161		18		44		60		5			13		309		167.1	
12/17/2022	13	60	11.1		165		22		62		64		4			14		309		166.7	
12/17/2022	14	60	11.0		161		21		70		70		4			14		310		165.7	
12/17/2022	15	60	11.0		163		23		57		60		3	4		13	13	309	309	166.4	166.5
12/17/2022	16	60	11.1		165		22		59		62		2			13		309		166.0	
12/17/2022	17	60	11.0		154		20		52		62		3			14		310		164.9	
12/17/2022	18	60	11.1		155		20		70		71		3			13		308		167.0	
12/17/2022	19	60	11.1		151		22		66		66		3	3		13		309	309	165.7	165.9
12/17/2022	20	60	10.8		152		23		67		65		3			13		310		167.2	
12/17/2022	21	60	11.1		150		19		57		66		3			13		309		163.2	
12/17/2022	22	60	10.7		158		22		55		61		3			13		310		166.8	
12/17/2022	23	60	10.8		146		21		52		59		4	3		13	13	309	309	165.0	165.6

Average: Geometric Mean Average:	168	17	OR	72	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 12/17/22

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.
12/17/2022	0	60	10.1		177		0		30		100		2			14		311		166.0	
12/17/2022	1	60	10.2		170		0		22		100		3			13		311		166.7	
12/17/2022	2	60	10.3		179		2		60		97		4			14		311		165.8	
12/17/2022	3	60	10.3		178		2		58		96		2	3		14		311	311	166.9	166.3
12/17/2022	4	60	10.3		171		5		61		92		5			14		311		167.4	
12/17/2022	5	60	10.3		181		2		47		95		2			14		311		167.1	
12/17/2022	6	60	10.6		146		23		101		77		3			14		311		166.1	
12/17/2022	7	60	10.4		138		7		56		87		3	4		14	14	311	311	166.7	166.8
12/17/2022	8	60	10.3		141		5		44		89		3			14		311		166.9	
12/17/2022	9	60	10.5		139		5		45		89		2			14		311		166.5	
12/17/2022	10	60	10.4		140		3		42		93		3			14		311		166.3	
12/17/2022	11	60	10.5		139		2		34		94		2	3		14		311	311	166.9	166.6
12/17/2022	12	60	10.3		140		3		39		91		3			14		311		167.4	
12/17/2022	13	60	10.5		139		7		44		84		2			14		311		166.9	
12/17/2022	14	60	10.5		138		13		51		75		2			14		311		166.4	
12/17/2022	15	60	10.4		141		9		56		84		2	2		14	14	311	311	166.5	166.8
12/17/2022	16	60	10.6		140		19		60		68		1			14		311		167.0	
12/17/2022	17	60	10.6		139		12		47		75		1			14		311		166.8	
12/17/2022	18	60	10.6		140		14		51		72		2			13		311		167.2	
12/17/2022	19	60	10.5		139		7		39		83		2	1		14		311	311	166.8	166.9
12/17/2022	20	60	10.5		140		7		41		83		1			13		311		166.9	
12/17/2022	21	60	10.7		141		11		40		73		1			14		311		166.0	
12/17/2022	22	60	10.5		139		14		45		68		1			14		311		167.1	
12/17/2022	23	60	10.6		140		8		36		77		1	1		14	14	311	311	166.2	166.5

Average: Geometric Mean Average:	149	4	OR	92	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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 17-Dec-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	1	2	2	2	2	2	2	2	1
1	2	2	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	2	2	2	2	2	1
4	2	2	2	2	2	2	2	2	1	2	2
5	1	1	1	1	1	1	1	1	2	1	1
6	2	IC	6	IC	2	2	2	2	2	2	2
7	2		2	1	1	1	1	1	1	1	1
8	1	1	2	1	1	2	2	1	2	2	1
9	2	2	2	2	2	1	1	1	1	1	1
10	1	2	1	1	1	2	1	1	1	2	1
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	1	1	1	1	1	1	1	1	1	1	1
14	1	1	1	1	1	1	1	2	1	1	1
15	1	1	2	2	2	2	2	2	2	2	2
16	2	2	2	2	2	1	1	1	1	1	2
17	1	1	1	1	1	1	2	1	1	1	1
18	1	1	1	2	2	1	2	2	2	1	1
19	2	2	2	2	2	2	2	2	2	2	2
20	1	1	1	1	1	1	2	2	2	1	1
21	2	2	2	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	2	2	2	2	2	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-Dec-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
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