



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



Date 8/4/22

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.
8/4/2022	0	60	9.5		179		0		49		100		4			13		299		165.9	
8/4/2022	1	60	9.6		191		0		42		99		3			13		309		165.5	
8/4/2022	2	60	9.6		190		1		46		98		3			13		309		165.1	
8/4/2022	3	60	9.6		185		1		43		97		3	3		13		310	307	165.2	165.4
8/4/2022	4	60	9.5		185		1		41		98		4			13		309		164.3	
8/4/2022	5	60	9.6		193		1		45		98		4			12		310		164.6	
8/4/2022	6	60	9.8		181		5		47		89		5			12		309		166.4	
8/4/2022	7	60	9.8		186		3		44		94		6	5		13	13	310	309	162.8	164.5
8/4/2022	8	60	9.9		181		3		43		93		5			13		309		163.7	
8/4/2022	9	60	9.9		175		38		192		80		7			13		309		165.9	
8/4/2022	10	60	9.7		189		42		158		74		6			13		309		165.0	
8/4/2022	11	60	9.7		198		3		59		95		5	6		13		310	309	164.6	164.8
8/4/2022	12	60	9.9		194		3		50		95		4			13		309		165.0	
8/4/2022	13	60	10.1		191		9		81		89		5			13		309		164.5	
8/4/2022	14	60	10.0		187		2		39		95		5			14		310		165.6	
8/4/2022	15	60	10.0		197		3		55		94		5	5		13	13	309	309	164.4	164.8
8/4/2022	16	60	10.0		196		4		58		93		4			13		309		164.4	
8/4/2022	17	60	10.3		198		9		64		87		4			13		310		165.5	
8/4/2022	18	60	10.1		190		6		56		89		4			13		310		165.1	
8/4/2022	19	60	10.0		192		13		80		84		5	4		13		309	309	165.2	165.0
8/4/2022	20	60	10.2		190		46		133		65		5			13		309		164.6	
8/4/2022	21	60	10.0		197		26		79		68		4			13		310		166.1	
8/4/2022	22	60	10.1		195		16		63		74		3			13		309		165.6	
8/4/2022	23	60	10.0		184		12		53		78		4	4		13	13	310	309	165.0	165.3

Average:
Geometric Mean Average:

Limit:

189	4
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

94
≥ 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 8/4/22

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.
8/4/2022	0	60	10.2		181		0		24		99		2			14		310		165.1	
8/4/2022	1	60	10.2		184		0		23		99		2			14		310		165.5	
8/4/2022	2	60	10.2		180		0		26		99		2			14		310		165.8	
8/4/2022	3	60	10.3		176		0		25		99		2	2		14		309	310	165.4	165.4
8/4/2022	4	60	10.4		178		4		28		87		3			13		310		166.4	
8/4/2022	5	60	10.3		175		3		15		79		3			13		310		166.3	
8/4/2022	6	60	10.4		166		3		12		73		8			14		310		165.3	
8/4/2022	7	60	10.2		167		3		11		75		5	5		14	14	310	310	164.5	165.6
8/4/2022	8	60	10.1		172		3		21		84		3			14		310		166.9	
8/4/2022	9	60	10.3		161		22		100		78		4			14		309		165.7	
8/4/2022	10	60	10.2		165		7		38		83		3			14		310		164.8	
8/4/2022	11	60	9.9		165		5		40		88		3	3		14		310	310	165.8	165.8
8/4/2022	12	60	9.9		166		3		23		88		2			14		310		165.2	
8/4/2022	13	60	10.2		167		9		58		85		3			14		309		165.2	
8/4/2022	14	60	10.4		170		5		31		83		4			14		311		164.2	
8/4/2022	15	60	10.1		175		3		26		88		4	3		14	14	310	310	164.6	164.8
8/4/2022	16	60	10.2		170		3		23		86		3			14		310		163.3	
8/4/2022	17	60	10.2		174		3		23		87		3			13		310		165.1	
8/4/2022	18	60	10.2		169		3		17		84		4			13		310		165.9	
8/4/2022	19	60	10.4		172		10		57		83		3	3		17		310	310	165.9	165.1
8/4/2022	20	60	10.3		174		21		90		77		4			13		310		166.3	
8/4/2022	21	60	10.2		165		13		51		74		4			14		310		165.3	
8/4/2022	22	60	10.1		173		6		29		80		2			14		310		166.2	
8/4/2022	23	60	10.2		167		7		32		78		3	3		14	14	310	310	165.1	165.7

Average: Geometric Mean Average:	171	3	OR	89	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

Status Flags

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 04-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 04-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	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	1	1	1	0	0
6	1	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	0	0	0	0	1	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0
18	0	0	1	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	1	1	0	0	1	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