



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



Date 4/25/22

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.
4/25/2022	0	60	9.5		164		12		83		86		4			13		303		167.1	
4/25/2022	1	60	9.3		169		7		80		91		4			13		294		164.9	
4/25/2022	2	60	9.4		170		19		75		74		3			13		307		167.8	
4/25/2022	3	60	9.9		154		12		64		81		2	3		13		298	301	166.0	166.5
4/25/2022	4	60	9.5		167		28		78		65		3			13		310		170.5	
4/25/2022	5	60	9.5		169		23		80		71		4			13		318		168.4	
4/25/2022	6	60	9.5		165		19		60		68		4			13		316		167.5	
4/25/2022	7	60	9.4		167		11		37		71		5	4		13	13	314	315	164.9	167.8
4/25/2022	8	60	9.2		166		12		49		76		5			13		314		167.4	
4/25/2022	9	60	9.8		153		9		38		77		4			13		308		168.9	
4/25/2022	10	60	9.8		181		16		42		63		5			13		313		166.5	
4/25/2022	11	60	9.9		190		19		57		66		6	5		14		308	311	169.6	168.1
4/25/2022	12	60	9.7		182		14		34		59		6			14		313		166.8	
4/25/2022	13	60	9.7		179		19		42		55		7			14		315		165.5	
4/25/2022	14	60	9.7		180		16		36		55		8			13		319		166.1	
4/25/2022	15	60	9.8		183		15		33		55		7	7		14	14	313	315	166.3	166.2
4/25/2022	16	60	9.6		177		21		53		61		9			14		312		167.9	
4/25/2022	17	60	9.8		181		25		134		82		7			14		298		164.4	
4/25/2022	18	60	9.4		180		17		87		81		5			13		298		167.3	
4/25/2022	19	60	9.7		180		20		54		63		5	7		13		308	304	165.1	166.2
4/25/2022	20	60	9.6		187		21		45		53		4			14		313		167.9	
4/25/2022	21	60	9.7		189		22		48		55		4			14		317		168.4	
4/25/2022	22	60	9.8		184		14		48		71		5			14		307		166.2	
4/25/2022	23	60	9.7		182		19		67		72		4	4		13	14	309	311	165.9	167.1

Average:
Geometric Mean Average:

Limit:

175	16
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

71
≥ 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 4/25/22

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.
4/25/2022	0	60	10.1		177		3		83		97		3			14		310		154.3	
4/25/2022	1	60	9.7		194		6		76		92		3			14		310		164.9	
4/25/2022	2	60	9.8		197		0		50		100		4			14		310		166.8	
4/25/2022	3	60	9.9		188		1		62		98		3	3		14		310	310	166.9	163.2
4/25/2022	4	60	9.8		195		4		61		94		7			14		310		167.8	
4/25/2022	5	60	9.7		195		0		62		99		2			14		310		168.1	
4/25/2022	6	60	9.9		197		1		57		98		3			14		310		168.4	
4/25/2022	7	60	10.3		191		1		42		99		22	9		14	14	310	310	163.6	167.0
4/25/2022	8	60	11.0		190		1		49		98		2			14		310		166.1	
4/25/2022	9	60	11.0		198		3		55		95		3			14		310		164.9	
4/25/2022	10	60	10.9		200		8		75		89		5			14		310		166.1	
4/25/2022	11	60	10.8		184		1		27		95		5	4		14		310	310	167.4	166.1
4/25/2022	12	60	10.7		197		1		27		98		7			14		310		166.9	
4/25/2022	13	60	10.8		196		0		30		99		2			14		310		167.5	
4/25/2022	14	60	10.8		194		0		24		100		4			12		310		167.3	
4/25/2022	15	60	10.8		201		0		31		100		4	4		13	14	310	310	168.1	167.4
4/25/2022	16	60	10.9		189		10		72		86		4			15		310		167.3	
4/25/2022	17	60	10.7		194		24		106		78		4			14		310		166.7	
4/25/2022	18	60	10.0		194		15		87		83		4			14		310		166.7	
4/25/2022	19	60	9.6		191		1		52		99		3	4		14		310	310	164.6	166.3
4/25/2022	20	60	9.7		202		0		38		100		3			14		310		167.3	
4/25/2022	21	60	9.8		188		0		33		99		2			13		310		166.6	
4/25/2022	22	60	10.5		192		0		39		99		3			13		310		154.7	
4/25/2022	23	60	10.9		185		1		44		97		5	4		13	14	311	310	156.9	161.3

Average: Geometric Mean Average:	193	1	OR	98	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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 25-Apr-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 25-Apr-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	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	IBC	6	IBC	2	2	2	2	2	2	3
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