



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



Date 6/28/22

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.
6/28/2022	0	60	10.1		193		14		52		73		3			13		309		166.4	
6/28/2022	1	60	10.2		197		17		45		62		3			13		309		167.9	
6/28/2022	2	60	10.3		198		23		72		68		3			14		309		164.4	
6/28/2022	3	60	10.2		198		17		49		66		3	3		13		310	309	166.6	166.3
6/28/2022	4	60	10.3		194		15		39		62		3			13		309		167.3	
6/28/2022	5	60	10.2		198		14		34		60		3			13		310		165.5	
6/28/2022	6	60	10.2		198		11		27		61		3			14		310		168.2	
6/28/2022	7	60	10.2		193		10		29		66		5	4		14	14	309	309	166.4	166.8
6/28/2022	8	60	10.4		191		17		74		77		4			12		309		167.6	
6/28/2022	9	60	10.5		197		20		77		74		4			14		309		167.6	
6/28/2022	10	60	10.4		198		14		65		78		4			11		309		169.6	
6/28/2022	11	60	10.3		194		20		86		77		4	4		8		309	309	167.5	168.1
6/28/2022	12	60	10.8		195		17		68		76		2			19		309		169.0	
6/28/2022	13	60	10.5		198		20		94		79		4			14		310		165.5	
6/28/2022	14	60	10.4		196		11		61		82		4			14		309		167.4	
6/28/2022	15	60	10.6		193		22		101		78		4	3		14	13	309	309	166.3	167.1
6/28/2022	16	60	10.5		179		6		63		91		3			15		309		169.2	
6/28/2022	17	60	10.5		197		6		50		88		3			15		310		167.8	
6/28/2022	18	60	10.5		193		10		72		86		3			15		309		167.7	
6/28/2022	19	60	10.5		198		16		78		79		3	3		15		309	309	168.1	168.2
6/28/2022	20	60	10.4		195		18		86		79		3			15		309		165.4	
6/28/2022	21	60	10.4		194		12		65		82		3			15		309		167.2	
6/28/2022	22	60	10.4		196		10		55		81		3			15		310		167.2	
6/28/2022	23	60	10.2		189		23		122		81		4	3		15	15	309	309	165.2	166.3

Average: Geometric Mean Average:	195	14	77	OR	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	see above	≤ 12 8-HR. Block Average	lb/hr	see above	≤ 345 4-HR Block Average	°F	see above	≤ 173 4-HR Block Average	klb/hr

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 6/28/22

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.
6/28/2022	0	60	10.5		190		17		25		33		1			13		310		166.0	
6/28/2022	1	60	10.4		191		20		21		3		1			13		311		166.1	
6/28/2022	2	60	10.2		191		15		14		0		1			13		315		168.2	
6/28/2022	3	60	10.6		178		2		7		74		1	I		13		310	312	165.6	166.5
6/28/2022	4	60	10.3		174		6		11		50		3			12		302		169.2	
6/28/2022	5	60	10.4		171		3		11		71		2			10		301		166.4	
6/28/2022	6	60	10.4		173		4		8		47		2			12		302		166.1	
6/28/2022	7	60	10.3		188		2		4		48		3	2		15	13	309	303	165.6	166.8
6/28/2022	8	60	10.7		186		1		33		96		4			15		309		163.6	
6/28/2022	9	60	10.6		178		5		34		86		2			15		308		168.6	
6/28/2022	10	60	10.5		186		1		21		95		3			17		311		168.1	
6/28/2022	11	60	10.6		169		1		25		98		2	3		19		308	309	167.9	167.0
6/28/2022	12	60	10.6		167		2		23		93		3			12		306		167.7	
6/28/2022	13	60	10.3		182		4		28		87		2			13		310		167.8	
6/28/2022	14	60	10.4		171		1		19		95		3			9		313		167.9	
6/28/2022	15	60	10.5		176		9		51		83		3	3		15	14	310	310	166.8	167.5
6/28/2022	16	60	10.4		175		2		28		94		2			15		310		168.1	
6/28/2022	17	60	10.3		181		1		23		96		2			15		311		167.9	
6/28/2022	18	60	10.0		174		3		31		92		62			17		310		168.3	
6/28/2022	19	60	9.9		169		0		36		100		1	17		15		294	306	167.0	167.8
6/28/2022	20	60	10.2		179		0		52		100		1			15		291		167.2	
6/28/2022	21	60	10.3		186		0		41		100		1			17		292		167.1	
6/28/2022	22	60	10.3		180		0		32		100		1			17		294		168.4	
6/28/2022	23	60	10.2		179		0		34		99		1	1		17	16	296	293	167.7	167.6

Average: Geometric Mean Average:	179	1	OR	95	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 28-Jun-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	3	3	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	3	3	3	3	3	2	2	2	3	2
5	2	2	2	2	2	2	2	3	2	2	2
6	2	IC	6	IC	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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 28-Jun-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
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown