



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



Date 6/30/22

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.
6/30/2022	0	60	10.3		177		12		61		80		3			16		309		162.2	
6/30/2022	1	60	10.3		183		13		65		80		2			16		310		164.0	
6/30/2022	2	60	10.4		191		10		61		83		2			15		309		162.5	
6/30/2022	3	60	10.5		189		10		54		82		2	2		15		309	309	161.9	162.6
6/30/2022	4	60	10.3		190		12		60		79		2			15		310		165.7	
6/30/2022	5	60	10.5		193		4		35		89		4			15		309		159.6	
6/30/2022	6	60	10.4		188		7		34		80		4			15		310		164.8	
6/30/2022	7	60	10.6		186		7		41		82		4	3		15	15	309	309	165.1	163.8
6/30/2022	8	60	10.5		180		13		58		77		3			15		309		166.6	
6/30/2022	9	60	10.7		179		10		47		79		3			14		309		168.4	
6/30/2022	10	60	11.1		179		3		36		91		1			16		309		167.8	
6/30/2022	11	60	10.7		172		7		51		86		1	2		15		309	309	170.2	168.2
6/30/2022	12	60	10.9		184		2		27		94		2			15		309		163.8	
6/30/2022	13	60	10.6		198		10		65		85		4			15		310		162.2	
6/30/2022	14	60	10.4		193		54		194		72		5			16		310		168.2	
6/30/2022	15	60	10.4		194		39		147		73		5	4		15	15	309	309	164.5	164.7
6/30/2022	16	60	10.3		181		12		57		78		4			16		309		166.0	
6/30/2022	17	60	10.4		191		20		65		69		4			16		309		168.5	
6/30/2022	18	60	10.4		196		17		58		72		4			16		309		164.7	
6/30/2022	19	60	10.1		196		16		53		69		6	4		16		310	309	165.7	166.2
6/30/2022	20	60	10.1		191		16		58		72		4			16		309		165.3	
6/30/2022	21	60	10.3		190		13		50		74		4			16		309		165.1	
6/30/2022	22	60	10.2		188		18		56		68		4			16		310		165.6	
6/30/2022	23	60	10.0		192		13		50		74		4	4		16	16	310	309	166.9	165.7

Average:
Geometric Mean Average:

Limit:

187	11
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

80
≥ 75% Removal Efficiency

see above
≤ 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 6/30/22

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.
6/30/2022	0	60	10.3		193		2		29		92		2			13		306		166.6	
6/30/2022	1	60	10.2		193		1		18		96		2			16		309		166.8	
6/30/2022	2	60	10.3		188		1		16		98		2			15		309		167.7	
6/30/2022	3	60	10.3		182		0		15		99		1	2		13		308	308	168.4	167.4
6/30/2022	4	60	10.2		182		0		15		100		2			14		303		166.9	
6/30/2022	5	60	10.2		192		0		16		99		2			14		302		165.1	
6/30/2022	6	60	10.3		186		0		9		95		2			13		311		165.8	
6/30/2022	7	60	10.5		185		0		11		98		4	3		14	14	309	306	163.7	165.4
6/30/2022	8	60	10.6		184		7		24		72		3			16		315		166.5	
6/30/2022	9	60	10.4		181		4		11		66		4			14		312		165.9	
6/30/2022	10	60	10.2		184		1		20		92		3			14		314		168.4	
6/30/2022	11	60	10.3		182		0		6		100		2	3		14		312	313	166.3	166.8
6/30/2022	12	60	10.6		192		1		23		96		2			14		307		165.6	
6/30/2022	13	60	10.5		199		8		49		83		2			14		307		166.1	
6/30/2022	14	60	10.3		196		72		144		50		3			15		316		166.2	
6/30/2022	15	60	10.3		193		37		92		59		4	3		13	14	313	311	167.1	166.3
6/30/2022	16	60	10.4		193		4		24		82		3			14		304		166.6	
6/30/2022	17	60	10.1		185		15		48		67		80			14		301		167.1	
6/30/2022	18	60	10.0		186		3		26		89		2			15		297		166.5	
6/30/2022	19	60	10.0		185		3		15		77		2	22		11		304	302	166.9	166.8
6/30/2022	20	60	10.1		195		12		18		33		2			13		309		166.2	
6/30/2022	21	60	10.0		193		7		8		15		1			15		324		166.5	
6/30/2022	22	60	10.2		193		14		15		5		2			12		314		167.0	
6/30/2022	23	60	10.1		190		6		8		26		1	2		14	13	313	315	166.9	166.7

Average: Geometric Mean Average:	189	2	OR	91	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 30-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	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	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 30-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	2
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	2	2	2	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