



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



Date 7/12/22

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.
7/12/2022	0	60	9.4		174		17		60		72		5			13		309		167.8	
7/12/2022	1	60	9.6		191		19		40		52		4			13		310		166.5	
7/12/2022	2	60	9.6		187		22		66		67		4			13		309		165.9	
7/12/2022	3	60	9.7		190		19		55		66		3	4		13		309	309	164.3	166.1
7/12/2022	4	60	9.5		180		21		73		72		4			13		310		163.8	
7/12/2022	5	60	9.6		185		20		58		66		4			13		309		166.3	
7/12/2022	6	60	9.7		182		17		38		55		5			13		309		163.2	
7/12/2022	7	60	9.5		179		19		41		53		5	5		13	13	310	310	165.0	164.6
7/12/2022	8	60	9.7		181		13		27		52		6			13		309		165.4	
7/12/2022	9	60	9.7		179		20		45		55		8			13		310		165.8	
7/12/2022	10	60	9.8		189		19		59		67		8			13		309		164.5	
7/12/2022	11	60	9.9		189		16		48		66		4	7		13		310	309	165.5	165.3
7/12/2022	12	60	9.9		189		15		53		73		5			13		309		165.6	
7/12/2022	13	60	9.7		179		18		47		62		5			13		310		167.8	
7/12/2022	14	60	10.0		185		17		43		61		5			13		309		166.7	
7/12/2022	15	60	9.8		176		4		24		84		5	5		14	13	309	309	164.0	166.0
7/12/2022	16	60	9.8		164		2		26		93		5			13		309		164.7	
7/12/2022	17	60	10.0		190		15		58		74		5			14		309		165.5	
7/12/2022	18	60	9.9		187		19		83		77		5			13		309		166.9	
7/12/2022	19	60	10.0		184		18		68		74		4	5		12		309	309	163.9	165.3
7/12/2022	20	60	9.9		180		17		69		76		4			13		310		164.0	
7/12/2022	21	60	9.8		180		12		56		79		4			13		309		165.5	
7/12/2022	22	60	9.6		179		10		48		80		4			13		310		166.0	
7/12/2022	23	60	9.6		170		15		66		77		4	4		13	13	309	309	165.7	165.3

Average:
Geometric Mean Average:

Limit:

182	14
≤ 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 7/12/22

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.
7/12/2022	0	60	10.8		196		6		23		75		2			13		305		163.3	
7/12/2022	1	60	10.3		192		7		33		80		2			13		301		166.5	
7/12/2022	2	60	10.6		197		12		52		76		2			14		299		166.2	
7/12/2022	3	60	10.7		191		12		34		64		3	2		13		304	302	163.3	164.8
7/12/2022	4	60	10.7		191		16		39		58		3			13		310		164.7	
7/12/2022	5	60	11.0		197		24		41		42		4			13		306		160.8	
7/12/2022	6	60	11.3		193		7		22		70		5			13		306		155.7	
7/12/2022	7	60	11.3		191		40		84		53		7	5		13	13	307	307	153.4	158.6
7/12/2022	8	60	11.1		189		29		80		64		5			13		312		162.8	
7/12/2022	9	60	10.8		182		20		61		67		6			13		308		164.7	
7/12/2022	10	60	10.9		194		25		75		66		6			13		311		163.8	
7/12/2022	11	60	10.9		194		14		44		69		4	5		13		310	310	163.5	163.7
7/12/2022	12	60	10.9		188		14		49		72		3			14		311		163.9	
7/12/2022	13	60	10.8		188		6		29		79		3			13		312		164.5	
7/12/2022	14	60	10.9		187		1		27		96		3			13		305		164.1	
7/12/2022	15	60	10.7		193		1		21		97		4	3		13	13	306	308	163.6	164.0
7/12/2022	16	60	10.7		192		0		18		99		3			13		308		164.4	
7/12/2022	17	60	10.8		195		4		31		86		4			13		314		163.3	
7/12/2022	18	60	10.8		193		8		36		77		3			13		316		163.9	
7/12/2022	19	60	10.9		183		7		43		85		2	3		13		312	313	165.1	164.2
7/12/2022	20	60	10.8		192		5		36		86		3			13		307		164.5	
7/12/2022	21	60	10.6		190		5		32		83		2			13		314		166.1	
7/12/2022	22	60	10.7		189		7		40		83		2			13		312		165.2	
7/12/2022	23	60	10.6		183		11		56		80		2	2		13	13	310	311	167.8	165.9

Average: Geometric Mean Average:	191	7	OR	81	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 12-Jul-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 12-Jul-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	2	1	1	1	1	1	1	1	1	1
2	1	1	1	2	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	2	1	1	1	1	1	1
6	1	IBC	5	IBC	1	1	1	1	1	1	2
7	1	1	1	1	1	1	1	1	1	1	1
8	1	2	1	1	2	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	2	1	2	1	2	2	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