



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



Date 7/8/22

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.
7/8/2022	0	60	10.0		184		14		37		63		3			13		309		164.3	
7/8/2022	1	60	9.8		186		7		30		78		3			13		309		165.5	
7/8/2022	2	60	9.8		183		10		46		78		3			13		309		164.3	
7/8/2022	3	60	9.9		188		28		108		74		4	3		13		309	309	165.4	164.9
7/8/2022	4	60	9.5		182		17		57		70		3			13		309		165.6	
7/8/2022	5	60	9.6		179		12		43		72		4			13		309		165.9	
7/8/2022	6	60	9.3		164		11		53		78		130			13		309		163.5	
7/8/2022	7	60	9.8		179		9		41		77		4	35		13	13	309	309	166.9	165.4
7/8/2022	8	60	10.1		191		22		59		62		3			13		310		163.1	
7/8/2022	9	60	10.0		197		23		63	IBM	63	IBM	3			13		309		165.1	
7/8/2022	10	60	10.0		193		14		47	IBM	70	IBM	4			14		310		164.4	
7/8/2022	11	60	9.7		187		12		51		77		4	3		13		309	309	165.6	164.6
7/8/2022	12	60	9.8		190		17		64		74		3			13		309		164.8	
7/8/2022	13	60	9.9		184		15		63		76		3			13		309		164.5	
7/8/2022	14	60	9.6		184		14		53		74		4			13		310		165.9	
7/8/2022	15	60	9.6		185		8		50		84		4	4		14	13	309	309	167.3	165.7
7/8/2022	16	60	9.7		191		12		58		79		4			13		309		166.1	
7/8/2022	17	60	9.7		192		8		45		82		4			13		310		165.5	
7/8/2022	18	60	10.1		197		12		48		74		3			13		309		164.8	
7/8/2022	19	60	10.0		189		18		61		71		3	4		13		310	309	164.7	165.3
7/8/2022	20	60	9.9		188		14		56		74		3			13		309		165.5	
7/8/2022	21	60	9.8		191		12		54		77		3			13		309		167.5	
7/8/2022	22	60	9.9		189		16		56		72		4			14		310		163.7	
7/8/2022	23	60	9.9		191		13		53		75		3	3		13	13	309	309	165.0	165.4

Average:
Geometric Mean Average:

Limit:

187	13
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

75
≥ 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 7/8/22

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.
7/8/2022	0	60	10.3		192		10		49		81		1			13		306		165.7	
7/8/2022	1	60	10.1		187		19		70		72		21			14		310		173.1	
7/8/2022	2	60	10.9		196		20		68		71		2			13		315		162.0	
7/8/2022	3	60	10.7		195		17		58		71		2	7		14		317	312	164.9	166.4
7/8/2022	4	60	10.6		197		15		57		74		3			14		313		163.7	
7/8/2022	5	60	10.5		199		15		26		45		3			13		317		164.2	
7/8/2022	6	60	10.8		197		7		12		42		3			13		315		159.4	
7/8/2022	7	60	10.6		192		23		38		40		2	3		13	13	314	315	166.0	163.3
7/8/2022	8	60	10.7		191		23		26		12		2			13		314		167.2	
7/8/2022	9	60	10.8		195		19		31	IBM	38	IBM	3			13		315		163.8	
7/8/2022	10	60	10.5		189		19		31	IBM	38	IBM	3			13		316		167.3	
7/8/2022	11	60	10.7		188		10		42		75		1	3		13		311	314	166.3	166.2
7/8/2022	12	60	10.6		190		14		44		69		1			13		307		168.1	
7/8/2022	13	60	10.6		192		15		39		62		2			13		310		166.9	
7/8/2022	14	60	10.8		198		16		37		56		3			13		315		162.9	
7/8/2022	15	60	10.7		195		10		26		63		2	2		13	13	320	313	164.5	165.6
7/8/2022	16	60	10.6		196		5		22		75		2			13		319		163.8	
7/8/2022	17	60	10.6		196		5		21		77		2			13		315		165.3	
7/8/2022	18	60	10.9		194		10		31		69		2			13		311		165.9	
7/8/2022	19	60	10.8		196		13		56		77		2	2		13		305	312	167.0	165.5
7/8/2022	20	60	10.9		187		12		37		66		1			13		306		165.9	
7/8/2022	21	60	10.6		185		14		45		68		1			13		308		171.5	
7/8/2022	22	60	10.8		194		17		50		66		1			13		308		168.0	
7/8/2022	23	60	10.1		176		12		70		83		2	1		13	13	302	306	171.1	169.1

Average: Geometric Mean Average:	192	13	OR	67	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 08-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 08-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	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	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	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