



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



Date 7/10/22

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.
7/10/2022	0	60	9.8		184		6		45		87		3			13		309		163.0	
7/10/2022	1	60	9.6		191		12		48		75		3			13		310		165.1	
7/10/2022	2	60	9.5		194		11		42		73		3			14		310		168.9	
7/10/2022	3	60	9.8		189		11		43		74		3	3		13		309	309	163.9	165.2
7/10/2022	4	60	9.7		193		14		44		68		3			13		310		165.2	
7/10/2022	5	60	9.9		191		14		42		66		3			13		309		161.2	
7/10/2022	6	60	9.7		187		13		38		66		3			13		309		164.0	
7/10/2022	7	60	9.7		187		9		39		77		3	3		13	13	310	309	167.0	164.4
7/10/2022	8	60	9.8		189		9		37		76		2			13		309		167.4	
7/10/2022	9	60	9.8		194		11		39		71		3			13		309		166.1	
7/10/2022	10	60	9.9		189		13		39		68		2			13		310		167.0	
7/10/2022	11	60	10.0		193		13		42		69		3	3		13		309	309	166.1	166.6
7/10/2022	12	60	9.7		192		11		44		74		3			13		310		166.2	
7/10/2022	13	60	9.9		192		12		38		69		3			13		310		166.7	
7/10/2022	14	60	10.0		188		10		37		74		3			13		309		162.7	
7/10/2022	15	60	9.7		188		13		51		75		3	3		13	13	309	309	169.6	166.3
7/10/2022	16	60	10.1		191		16		55		70		4			13		310		164.0	
7/10/2022	17	60	10.0		196		12		48		75		3			13		309		163.5	
7/10/2022	18	60	9.8		197		15		62		75		4			13		309		164.2	
7/10/2022	19	60	9.8		195		15		78		81		4	4		13		310	310	165.0	164.2
7/10/2022	20	60	9.7		196		13		52		75		3			13		309		166.5	
7/10/2022	21	60	9.7		196		25		91		72		3			13		309		164.7	
7/10/2022	22	60	9.7		189		35		143		76		3			13		310		164.1	
7/10/2022	23	60	9.7		185		14		57		76		3	3		14	13	309	309	164.0	164.8

Average:
Geometric Mean Average:

Limit:

191	13
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

74
≥ 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 7/10/22

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.
7/10/2022	0	60	10.8		196		9		44		80		2			13		304		166.5	
7/10/2022	1	60	10.7		198		5		33		85		1			14		306		165.9	
7/10/2022	2	60	10.8		197		10		31		66		1			14		309		165.4	
7/10/2022	3	60	11.0		199		9		30		68		1	1		14		310	307	163.0	165.2
7/10/2022	4	60	10.8		197		16		35		53		2			13		315		164.9	
7/10/2022	5	60	10.6		191		15		41		64		1			13		320		167.2	
7/10/2022	6	60	10.3		193		9		38		77		1			13		310		168.7	
7/10/2022	7	60	10.5		191		7		45		85		1	1		13	13	309	314	169.3	167.5
7/10/2022	8	60	10.9		195		6		39		85		3			14		304		162.0	
7/10/2022	9	60	10.9		197		10		43		77		2			13		307		163.4	
7/10/2022	10	60	10.9		198		12		44		72		1			13		307		161.6	
7/10/2022	11	60	11.2		195		6		34		83		1	2		13		302	305	159.6	161.7
7/10/2022	12	60	10.9		197		10		33		69		1			13		305		163.9	
7/10/2022	13	60	10.9		198		12		41		70		2			13		308		163.9	
7/10/2022	14	60	10.7		198		15		41		63		1			14		316		165.5	
7/10/2022	15	60	10.7		197		12		40		70		2	1		14	13	315	311	166.1	164.8
7/10/2022	16	60	10.8		197		12		49		76		2			13		309		164.3	
7/10/2022	17	60	10.8		199		6		34		82		2			14		312		162.8	
7/10/2022	18	60	10.9		197		11		43		74		2			13		315		163.6	
7/10/2022	19	60	11.0		197		12		49		76		2	2		13		320	314	164.2	163.7
7/10/2022	20	60	11.0		197		3		45		94		1			14		304		161.1	
7/10/2022	21	60	11.0		198		9		39		77		1			14		308		161.6	
7/10/2022	22	60	10.9		196		8		39		78		1			14		312		163.8	
7/10/2022	23	60	11.1		196		13		50		75		2	1		14	14	312	309	162.6	162.3

Average: Geometric Mean Average:	196	9	OR	77	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 10-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	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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 10-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	2	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	2	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	2	1	1	1	2	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