



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



Date 11/12/22

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.
11/12/2022	0	60	10.3		192		16		74		79		5			14		309		165.5	
11/12/2022	1	60	10.5		196		24		105		78		5			14		310		165.3	
11/12/2022	2	60	10.5		193		25		102		75		5			14		309		166.1	
11/12/2022	3	60	10.5		190		17		76		77		5	5		14		309	309	166.0	165.7
11/12/2022	4	60	10.3		182		14		73		81		4			13		310		164.0	
11/12/2022	5	60	10.4		186		19		69		73		4			13		310		167.1	
11/12/2022	6	60	10.3		190		10		63		84		5			13		310		165.6	
11/12/2022	7	60	10.1		183		12		64		82		5	5		13	13	309	309	165.9	165.6
11/12/2022	8	60	10.1		173		11		65		84		5			14		309		166.9	
11/12/2022	9	60	10.1		179		8		64		87		4			14		309		168.6	
11/12/2022	10	60	10.8		189		17		83		80		5			14		310		166.3	
11/12/2022	11	60	11.0		195		13		66		80		5	5		14		309	309	166.0	167.0
11/12/2022	12	60	10.9		194		15		77		80		6			14		309		165.1	
11/12/2022	13	60	10.5		190		13		71		81		5			14		310		167.2	
11/12/2022	14	60	10.6		189		3		50		95		7			13		309		159.2	
11/12/2022	15	60	10.8		185		4		49		92		7	6		14	14	309	309	158.7	162.6
11/12/2022	16	60	10.5		187		4		43		91		6			14		310		165.2	
11/12/2022	17	60	10.4		190		4		44		90		5			13		309		169.2	
11/12/2022	18	60	10.6		192		3		42		93		6			14		309		165.1	
11/12/2022	19	60	10.7		186		12		60		80		6	6		13		309	309	166.0	166.4
11/12/2022	20	60	10.8		191		19		73		74		5			13		309		165.7	
11/12/2022	21	60	10.8		188		19		76		75		5			13		309		166.3	
11/12/2022	22	60	10.9		189		16		56		71		6			13		310		163.8	
11/12/2022	23	60	10.8		183		12		51		76		6	5		14	13	309	309	165.9	165.4

Average:
Geometric Mean Average:

Limit:

188	11
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

83
≥ 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 11/12/22

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.
11/12/2022	0	60	9.8		184		19		79		76		1			13		310		166.5	
11/12/2022	1	60	10.0		186		22		90		75		1			14		310		166.1	
11/12/2022	2	60	10.0		181		18		80		77		1			14		310		166.6	
11/12/2022	3	60	9.9		174		22		101		78		1	I		14		310	310	166.8	166.5
11/12/2022	4	60	9.8		175		13		79		83		2			14		310		166.8	
11/12/2022	5	60	9.3		169		17		80		79		0			14		310		166.3	
11/12/2022	6	60	9.3		177		9		57		84		1			14		310		167.4	
11/12/2022	7	60	9.1		180		8		59		86		1	I		14	14	310	310	166.7	166.8
11/12/2022	8	60	9.4		180		11		60		82		0			13		310		166.5	
11/12/2022	9	60	9.6		179		17		73		77		1			14		310		167.3	
11/12/2022	10	60	9.5		178		13		61		79		0			13		310		166.5	
11/12/2022	11	60	9.7		163		21		85		76		0	O		14		310	310	167.2	166.9
11/12/2022	12	60	9.7		176		12		77		85		1			14		310		165.8	
11/12/2022	13	60	9.5		180		16		74		79		0			13		310		166.8	
11/12/2022	14	60	9.5		186		6		42		86		1			14		310		164.6	
11/12/2022	15	60	10.3		182		5		43		88		2	I		14	14	310	310	157.5	163.7
11/12/2022	16	60	9.7		188		5		41		88		2			14		310		166.2	
11/12/2022	17	60	9.9		186		6		38		85		1			14		310		166.7	
11/12/2022	18	60	10.3		187		10		53		81		2			15		310		161.7	
11/12/2022	19	60	10.2		191		19		64		70		2	I		14		310	310	166.5	165.3
11/12/2022	20	60	10.2		185		16		60		73		1			14		310		167.5	
11/12/2022	21	60	10.4		185		15		54		72		1			13		310		165.9	
11/12/2022	22	60	10.4		183		19		55		66		1			14		310		167.0	
11/12/2022	23	60	10.5		183		14		50		73		1	I		14	14	310	310	165.2	166.4

Average:
Geometric Mean Average:

Limit:

181	13
≤ 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 °F 4-HR Block Average

°F

see above
≤ 173 4-HR Block Average

klb/hr

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 12-Nov-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	1	2	2	1	2	2
7	1	1	1	2	2	2	2	1	1	2	1
8	1	1	1	2	2	2	2	2	2	2	2
9	2	2	2	2	2	2	2	1	1	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 12-Nov-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	2	1	1	1	1	1	1	1	1
1	1	2	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	2	1	1	2	2	1
3	1	2	1	1	1	1	1	1	2	1	1
4	2	2	2	1	1	2	1	1	1	2	1
5	1	2	2	1	1	1	1	1	2	1	1
6	2	IBC	6	IBC	1	1	1	1	1	1	2
7	2	1	1	1	1	1	1	2	2	1	1
8	2	2	1	1	1	1	1	1	1	1	1
9	2	1	2	1	2	2	2	1	1	2	1
10	1	2	2	2	2	2	2	2	2	2	2
11	2	2	2	2	2	2	1	2	1	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	1	1	1	1	1	1	1	1	1
15	2	2	2	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	2	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	2	1	1	1	2	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