



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



Date 2/12/22

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.
2/12/2022	0	60	9.6		195		15		44		65		6			13		310		165.8	
2/12/2022	1	60	9.6		197		32		74		57		6			13		309		165.8	
2/12/2022	2	60	9.7		198		30		86		65		7			13		309		164.4	
2/12/2022	3	60	9.7		198		28		62		55		7	7		13		309	309	164.4	165.1
2/12/2022	4	60	9.7		197		17		46		63		7			13		310		165.4	
2/12/2022	5	60	9.6		189		7		24		70		7			13		309		161.8	
2/12/2022	6	60	9.3		181		1		12		93		7			13		309		161.9	
2/12/2022	7	60	9.3		196		3		22		88		6	6		13	13	309	309	168.4	164.4
2/12/2022	8	60	9.7		195		3		20		86		6			13		309		167.6	
2/12/2022	9	60	9.9		198		3		20		82		5			13		309		167.2	
2/12/2022	10	60	9.7		195		10		42		78		6			12		310		165.2	
2/12/2022	11	60	9.6		191		10		40		75		6	6		13		309	309	167.8	166.9
2/12/2022	12	60	9.8		191		4		13		67		4			12		310		166.8	
2/12/2022	13	60	9.8		189		2		9		77		5			13		309		165.3	
2/12/2022	14	60	9.7		183		1		10		86		5			12		309		166.1	
2/12/2022	15	60	9.7		193		7		31		77		6	5		13	13	309	309	166.8	166.2
2/12/2022	16	60	9.8		197		10		29		64		5			13		310		166.9	
2/12/2022	17	60	10.0		196		6		23		73		5			13		309		164.5	
2/12/2022	18	60	9.8		195		13		33		61		5			13		310		167.0	
2/12/2022	19	60	9.8		195		16		32		50		5	5		13		310	309	166.0	166.1
2/12/2022	20	60	9.7		197		14		25		45		5			13		309		167.1	
2/12/2022	21	60	9.8		196		18		33		46		5			13		309		168.8	
2/12/2022	22	60	9.6		197		7		24		70		7			13		310		166.1	
2/12/2022	23	60	9.7		196		4		18		80		5	6		13	13	309	309	165.1	166.8

Average:
Geometric Mean Average:

Limit:

194	7
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

73
≥ 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

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 2/12/22

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.
2/12/2022	0	60	8.9		193		12		42		71		3			13		310		166.5	
2/12/2022	1	60	9.0		195		12		30		59		2			13		310		167.3	
2/12/2022	2	60	8.9		198		14		36		60		2			13		310		166.4	
2/12/2022	3	60	8.9		194		22		44		51		2	2		13		310	310	167.0	166.8
2/12/2022	4	60	9.0		190		4		31		87		2			13		310		167.0	
2/12/2022	5	60	9.0		195		9		20		55		6			13		309		165.2	
2/12/2022	6	60	8.6		192		1		11		87		1			13		310		166.0	
2/12/2022	7	60	8.7		195		2		17		88		2	3		13	13	310	310	166.1	166.1
2/12/2022	8	60	8.8		187		2		22		92		3			13		310		167.1	
2/12/2022	9	60	8.9		188		2		23		91		2			13		310		167.0	
2/12/2022	10	60	8.8		185		6		36		83		2			13		310		166.4	
2/12/2022	11	60	8.7		186		8		42		80		3	2		13		310	310	167.3	167.0
2/12/2022	12	60	8.7		180		4		23		81		2			13		310		166.8	
2/12/2022	13	60	8.7		179		1		17		92		1			13		310		166.7	
2/12/2022	14	60	8.9		184		3		22		86		2			13		310		165.7	
2/12/2022	15	60	8.9		188		5		30		85		2	2		13	13	310	310	167.3	166.6
2/12/2022	16	60	8.9		181		4		25		83		2			13		310		166.4	
2/12/2022	17	60	8.9		184		4		28		84		1			13		310		166.3	
2/12/2022	18	60	8.7		194		6		29		79		2			13		310		166.5	
2/12/2022	19	60	8.7		192		6		29		78		2	2		13		310	310	167.0	166.6
2/12/2022	20	60	8.9		187		14		39		64		2			13		310		166.9	
2/12/2022	21	60	8.9		188		11		35		68		1			13		310		166.9	
2/12/2022	22	60	9.0		192		10		40		73		66			13		310		165.0	
2/12/2022	23	60	9.0		194		15		57		73		1	17		13	13	310	310	167.2	166.5

Average: Geometric Mean Average:	189	6	OR	80	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

Status Flags

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 12-Feb-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	2	1	1	2	1	1	1	2	1
10	1	2	2	2	2	2	2	2	2	2	1
11	2	2	2	2	2	2	1	2	1	2	1
12	1	2	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-Feb-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	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	IBC	6	IBC	2	2	2	2	2	2	2
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