



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



Date 5/7/22

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.
5/7/2022	0	60	10.1		158		8		29		71		7			14		316		167.0	
5/7/2022	1	60	10.0		161		6		31		81		6			13		308		168.8	
5/7/2022	2	60	10.1		173		12		38		68		7			13		311		168.5	
5/7/2022	3	60	10.0		173		13		38		66		7	7		14		305	310	167.6	168.0
5/7/2022	4	60	10.2		169		17		42		59		7			13		309		168.1	
5/7/2022	5	60	10.0		163		5		34		86		8			13		303		166.0	
5/7/2022	6	60	9.8		157		4		33		87		7			13		304		166.8	
5/7/2022	7	60	10.0		158		1		25		97		6	7		13	13	296	303	166.1	166.8
5/7/2022	8	60	10.0		167		4		26		84		7			14		312		165.3	
5/7/2022	9	60	10.0		167		5		28		83		6			13		309		166.2	
5/7/2022	10	60	10.0		175		6		27		77		6			13		314		166.6	
5/7/2022	11	60	10.2		174		7		24		72		8	7		13		321	314	167.7	166.5
5/7/2022	12	60	10.2		176		13		34		62		8			14		317		169.3	
5/7/2022	13	60	10.2		173		13		36		63		6			13		309		168.2	
5/7/2022	14	60	10.0		173		20		44		54		6			14		311		169.2	
5/7/2022	15	60	9.9		167		17		47		65		6	7		13	13	308	311	169.2	169.0
5/7/2022	16	60	10.2		164		3		41		93		6			13		300		165.6	
5/7/2022	17	60	10.2		164		5		60		92		6			14		292		165.6	
5/7/2022	18	60	10.2		159		12		41		71		6			13		305		166.2	
5/7/2022	19	60	10.2		169		23		64		64		6	6		13		309	302	165.8	165.8
5/7/2022	20	60	10.1		178		21		54		61		6			14		313		167.6	
5/7/2022	21	60	10.0		174		27		91		70		7			13		308		167.0	
5/7/2022	22	60	10.0		165		25		86		71		6			13		311		167.1	
5/7/2022	23	60	10.0		161		5		47		89		6	6		13	13	302	308	164.4	166.5

Average:
Geometric Mean Average:

Limit:

167	9
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

78
≥ 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 5/7/22

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.
5/7/2022	0	60	8.0		177		0		28		100		1			14		310		168.5	
5/7/2022	1	60	8.0		180		0		30		100		1			14		310		166.6	
5/7/2022	2	60	8.1		182		0		34		100		1			14		310		167.6	
5/7/2022	3	60	8.1		182		0		37		100		1	1		14		310	310	167.6	167.6
5/7/2022	4	60	8.2		163		0		22		100		3			14		310		167.7	
5/7/2022	5	60	8.2		188		0		30		100		2			14		310		167.5	
5/7/2022	6	60	8.2		191		0		27		100		2			15		310		167.8	
5/7/2022	7	60	8.2		185		0		22		100		2	2		14	14	310	310	167.4	167.6
5/7/2022	8	60	8.2		184		0		24		100		2			14		310		166.9	
5/7/2022	9	60	8.2		188		0		26		100		2			14		310		167.9	
5/7/2022	10	60	8.2		186		0		35		100		2			14		310		168.0	
5/7/2022	11	60	8.3		180		0		20		100		3	2		14		310	310	166.5	167.3
5/7/2022	12	60	8.3		177		0		23		100		2			15		310		168.3	
5/7/2022	13	60	8.2		185		0		36		100		2			14		310		168.0	
5/7/2022	14	60	8.4		182		0		30		100		2			14		310		166.7	
5/7/2022	15	60	8.1		187		0		34		99		2	2		14	14	310	310	168.0	167.8
5/7/2022	16	60	8.1		185		0		31		100		1			15		310		167.8	
5/7/2022	17	60	8.2		177		1		40		97		2			14		310		167.4	
5/7/2022	18	60	8.2		182		5		58		92		2			14		310		168.2	
5/7/2022	19	60	8.2		181		2		42		96		2	2		14		310	310	167.5	167.7
5/7/2022	20	60	8.2		179		3		52		95		2			15		310		168.6	
5/7/2022	21	60	8.2		185		5		56		91		1			14		310		168.8	
5/7/2022	22	60	8.3		190		7		62		89		1			14		310		166.2	
5/7/2022	23	60	8.2		191		1		40		97		1	1		14	14	310	310	166.2	167.5

Average:
Geometric Mean Average:

Limit:

183	0
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

100
≥ 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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 07-May-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	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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 07-May-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	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	2	IBC	4	IBC	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0

Status Flags

I - Invalid C - Calibration F - Offline T - Out of Control ^ - Startup
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown