



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



Date 8/10/23

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.
8/10/2023	0	60	10.0		140		6		57		89		3			13		309		162.9	
8/10/2023	1	60	10.1		141		8		62		87		0			13		309		164.6	
8/10/2023	2	60	10.0		141		8		63		87		0			14		309		165.6	
8/10/2023	3	60	10.1		141		12		65		81		0	1		17		310	309	165.6	164.7
8/10/2023	4	60	10.3		142		11		68		84		0			13		309		164.4	
8/10/2023	5	60	10.1		143		15		80		81		0			15		310		166.7	
8/10/2023	6	60	10.2		140		15		67		77		0			15		309		165.3	
8/10/2023	7	60	10.4		141		24		104		77		0	0		14	14	309	309	164.9	165.3
8/10/2023	8	60	10.1		142		8		62		87		0			13		300		166.2	
8/10/2023	9	60	10.0		143		2		54		96		0			13		314		166.7	
8/10/2023	10	60	10.3		134		2		46		95		0			12		310		165.7	
8/10/2023	11	60	10.5		137		10		46		79		1	0		13		311	309	166.0	166.2
8/10/2023	12	60	10.3		142		21		71		70		1			14		310		164.4	
8/10/2023	13	60	10.2		140		19		57		67		0			14		310		168.6	
8/10/2023	14	60	10.1		142		18		62		72		0			14		309		166.4	
8/10/2023	15	60	9.7		140		12		50		76		1	1		14	13	309	310	166.5	166.5
8/10/2023	16	60	9.7		141		5		34		86		0			14		309		166.8	
8/10/2023	17	60	9.9		141		19		69		72		0			14		309		167.3	
8/10/2023	18	60	10.0		140		18		83		78		0			14		310		166.8	
8/10/2023	19	60	10.2		141		13		81		84		0	0		15		309	309	167.5	167.1
8/10/2023	20	60	10.2		141		25		134		81		1			13		310		164.7	
8/10/2023	21	60	10.0		141		40		182		78		0			14		309		168.4	
8/10/2023	22	60	10.1		140		29		155		81		1			16		309		166.1	
8/10/2023	23	60	10.0		141		25		133		81		0	1		16	14	309	309	166.5	166.4

Average:
Geometric Mean Average:

Limit:

141	12
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

83
≥ 80% 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



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Date 8/10/23

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.
8/10/2023	0	60	10.6		138		2		50		96		4			12		313		164.3	
8/10/2023	1	60	10.6		139		0		27		100		5			12		310		162.5	
8/10/2023	2	60	10.6		139		0		32		100		4			11		307		165.9	
8/10/2023	3	60	10.7		142		2		29		92		4	4		15		310	310	165.9	164.6
8/10/2023	4	60	10.5		139		44		40		0		5			12		309		165.5	
8/10/2023	5	60	10.3		141		64		43		0		4			10		313		164.2	
8/10/2023	6	60	10.2		138		39		27		0		4			10		308		166.2	
8/10/2023	7	60	10.4		141		93		41		0		4	4		18	13	312	310	165.8	165.4
8/10/2023	8	60	10.4		138		95		32		0		6			10		311		165.2	
8/10/2023	9	60	10.2		142		97		38		0		5			17		311		166.2	
8/10/2023	10	60	10.3		138		88		44		0		6			17		311		163.4	
8/10/2023	11	60	10.2		141		131		153		14		6	6		17		309	311	166.2	165.3
8/10/2023	12	60	10.3		139		70		67		0		5			17		313		166.1	
8/10/2023	13	60	10.3		140		2		55		97		5			16		306		167.6	
8/10/2023	14	60	10.7		139		42		71		41		3			16		301		170.6	
8/10/2023	15	60	10.0		139		14		44		68		5	5		16	16	321	310	167.1	167.8
8/10/2023	16	60	9.5		137		0		23		100		5			16		315		165.6	
8/10/2023	17	60	10.0		141		0		42		100		5			15		310		163.3	
8/10/2023	18	60	10.0		140		10		78		87		5			15		310		166.7	
8/10/2023	19	60	9.9		140		37		195		81		5	5		14		310	311	166.8	165.6
8/10/2023	20	60	9.8		139		16		126		88		5			14		310		167.4	
8/10/2023	21	60	9.9		140		16		129		88		5			13		311		168.0	
8/10/2023	22	60	10.0		141		24		135		82		5			17		310		167.8	
8/10/2023	23	60	9.9		141		6		83		93		4	5		13	14	310	310	167.6	167.7

Average:
Geometric Mean Average:

Limit:

140	9
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

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88
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see above
≤ 69 4-HR Block Average

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 10-Aug-2023

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	3	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

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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-Aug-2023

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	5	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

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 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown