



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



Date 11/7/23

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.
11/7/2023	0	60	10.0		141		14		21		34		0			13		309		166.7	
11/7/2023	1	60	10.0		141		15		23		33		0			13		310		168.3	
11/7/2023	2	60	10.0		140		14		20		29		0			13		309		167.3	
11/7/2023	3	60	10.1		141		16		22		26		0	0		13		309	309	167.0	167.3
11/7/2023	4	60	10.3		143		10		23		55		1			13		309		163.4	
11/7/2023	5	60	10.1		142		11		25		57		0			13		310		164.1	
11/7/2023	6	60	10.2		141		13		21		38		1			13	13	310		166.5	
11/7/2023	7	60	10.7		137		5		14		65		1	0		13		309	309	165.9	165.0
11/7/2023	8	60	10.8		143		5		10		54		1			13		310		161.1	
11/7/2023	9	60	10.4		142		14		21		32		2			13		310		163.4	
11/7/2023	10	60	10.5		140		6		11		48		3			13		309		164.3	
11/7/2023	11	60	10.5		142		12		15		19		1	2		13		310	310	163.6	163.1
11/7/2023	12	60	10.2		142		5		13		62		1			13		309		163.2	
11/7/2023	13	60	10.2		139		2		11		77		1			13		309		162.8	
11/7/2023	14	60	9.9		142		17		22		25		5			13		310		166.2	
11/7/2023	15	60	10.5		141		14		15		9		1	2		13	13	309	309	165.0	164.3
11/7/2023	16	60	10.6		138		11		30		65		1			13		309		155.9	
11/7/2023	17	60	10.2		145		11		20		45		0			13		310		166.6	
11/7/2023	18	60	10.5		139		16		29		44		0			13		309		167.3	
11/7/2023	19	60	10.4		140		14		24		41		0	1		13		310	309	167.1	164.3
11/7/2023	20	60	10.3		142		17		17		2		1			13		309		164.9	
11/7/2023	21	60	10.2		139		18		27		33		1			13		309		165.8	
11/7/2023	22	60	10.4		142		18		20		7		0			13		310		166.6	
11/7/2023	23	60	10.5		141		20		16		0		1	1		14	13	310	309	165.1	165.6

Average:
Geometric Mean Average:

Limit:

141	11
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

41
≥ 80% 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

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 11/7/23

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.
11/7/2023	0	60	10.3		139		0		49		100		5			15		310		167.3	
11/7/2023	1	60	10.4		139		0		39		100		5			14		310		167.7	
11/7/2023	2	60	10.4		140		0		36		100		5			14		310		167.7	
11/7/2023	3	60	10.3		139		0		40		100		5	5		14		310	310	167.9	167.7
11/7/2023	4	60	10.3		143		1		59		99		5			14		310		167.1	
11/7/2023	5	60	10.3		140		1		50		98		4			14		310		167.0	
11/7/2023	6	60	10.5		137		1		40		97		6			14		310		166.5	
11/7/2023	7	60	10.5		141		4		54		93		5	5		15	14	310	310	161.9	165.6
11/7/2023	8	60	10.3		140		0		31		100		5			15		310		163.8	
11/7/2023	9	60	10.3		138		0		38		100		5			14		310		165.1	
11/7/2023	10	60	10.4		140		0		33		100		8			14		310		165.9	
11/7/2023	11	60	10.5		140		3		52		94		5	6		14		310	310	165.5	165.1
11/7/2023	12	60	10.4		139		0		29		100		6			12		310		160.0	
11/7/2023	13	60	10.0		141		7		59		87		6			14		310		163.9	
11/7/2023	14	60	10.0		141		0		41		99		5			18		310		167.4	
11/7/2023	15	60	10.5		139		16		54		71		5	5		16	15	310	310	167.8	164.8
11/7/2023	16	60	10.2		137		5		71		93		5			12		310		164.7	
11/7/2023	17	60	10.1		143		0		37		100		5			13		310		168.4	
11/7/2023	18	60	10.5		136		0		50		99		4			14		310		167.2	
11/7/2023	19	60	10.5		140		3		59		96		6	5		14		310	310	167.5	167.0
11/7/2023	20	60	10.3		140		0		42		100		5			14		310		168.9	
11/7/2023	21	60	10.4		140		0		47		100		5			14		310		167.9	
11/7/2023	22	60	10.5		140		3		61		96		5			15		310		167.7	
11/7/2023	23	60	10.5		139		6		65		91		4	5		14	14	310	310	167.2	167.9

Average:
Geometric Mean Average:

Limit:

140	0
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

100
≥ 80% 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 07-Nov-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	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	1	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	3	IC	5	IC	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	1	1	1	0	0
10	0	1	1	1	1	0	1	0	1	0	0
11	1	0	1	1	1	0	0	0	0	0	0
12	0	1	0	1	1	1	1	1	1	1	0
13	1	1	1	1	1	1	1	1	1	1	1
14	1	0	1	1	1	0	0	0	1	0	0
15	1	0	0	0	0	0	0	0	0	0	0
16	1	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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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-Nov-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	1	1	1	1	1	1	1	1	0	1	0
1	0	0	0	1	0	1	1	1	0	1	0
2	0	0	0	0	0	1	1	1	1	1	0
3	0	0	0	0	0	1	1	1	1	1	0
4	1	1	1	1	1	1	1	1	1	1	1
5	1	1	1	1	0	0	0	0	0	0	0
6	2	IBC	5	IBC	1	0	0	0	0	1	1
7	0	0	0	1	0	1	1	1	1	1	0
8	1	1	1	0	0	1	1	1	1	1	0
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	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
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