



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



Date 11/30/23

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.
11/30/2023	0	60	10.4		141		10		30		66		1			13		310		165.5	
11/30/2023	1	60	10.4		141		12		32		63		0			13		309		166.9	
11/30/2023	2	60	10.6		141		11		28		60		0			13		309		165.4	
11/30/2023	3	60	10.5		143		13		34		60		0	0		12		310	309	167.6	166.3
11/30/2023	4	60	10.7		144		15		48		68		1			13		309		166.4	
11/30/2023	5	60	10.6		142		14		37		62		1			13		310		165.2	
11/30/2023	6	60	10.5		140		13		44		70		1			14		309		167.5	
11/30/2023	7	60	10.5		139		13		35		63		0	1		15	13	309	309	166.9	166.5
11/30/2023	8	60	10.3		141		10		30		68		0			15		309		167.5	
11/30/2023	9	60	10.6		142		14		63		78		1			14		309		167.0	
11/30/2023	10	59	10.6		142		18		73		76		1			13		310		166.6	
11/30/2023	11	56	10.6		139		19		84		78		1	1		9		309	309	168.3	167.4
11/30/2023	12	60	10.7		140		16		83		81		2			13		309		162.7	
11/30/2023	13	60	10.5		141		11		60		83		2			12		310		164.9	
11/30/2023	14	60	10.6		138		16		73		78		2			14		309		166.9	
11/30/2023	15	60	10.6		142		14		79		82		0	1		13	13	309	309	166.5	165.3
11/30/2023	16	60	10.6		141		16		90		82		2			13		309		163.6	
11/30/2023	17	60	10.4		142		17		84		80		1			13		309		166.4	
11/30/2023	18	60	10.8		140		32		139		77		1			13		309		167.4	
11/30/2023	19	60	10.8		140		22		106		79		0	1		13		309	309	166.6	166.0
11/30/2023	20	60	10.8		142		25		120		79		0			13		309		167.6	
11/30/2023	21	60	10.5		140		14		77		82		1			13		309		167.9	
11/30/2023	22	60	10.6		142		14		71		80		0			13		310		167.0	
11/30/2023	23	60	10.6		141		16		80		80		1	0		13	13	309	309	166.0	167.1

Average:
Geometric Mean Average:

Limit:

141	15	75
≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean	≥ 80% Removal Efficiency

OR

see above
≤ 69 4-HR Block Average

ppmc

see above	see above	see above
≥ 12 8-HR. Block Average	≤ 345 °F 4-HR Block Average	≤ 173 4-HR Block Average

lb/hr °F 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 11/30/23

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.
11/30/2023	0	60	9.8		141		0		22		100		4			13		310		167.3	
11/30/2023	1	60	9.8		139		0		18		100		4			14		310		167.4	
11/30/2023	2	60	9.7		140		0		21		100		4			14		310		167.6	
11/30/2023	3	60	9.8		139		2		27		94		4	4		14		310	310	167.4	167.4
11/30/2023	4	60	9.7		145		1		28		97		4			15		310		167.1	
11/30/2023	5	60	10.0		140		2		36		93		3			14		310		166.9	
11/30/2023	6	60	10.1		138		1		32		98		4			9		310		167.6	
11/30/2023	7	60	10.0		140		1		29		98		4	4		10	13	310	310	167.1	167.2
11/30/2023	8	60	10.0		141		0		24		99		4			13		310		167.6	
11/30/2023	9	60	10.1		138		1		32		96		5			12		310		167.0	
11/30/2023	10	60	10.1		141		25		117		78		4			13		310		167.2	
11/30/2023	11	60	10.3		137		9		74		88		1	4		14		310	310	167.2	167.3
11/30/2023	12	60	9.9		139		20		103		80		4			14		310		164.9	
11/30/2023	13	60	9.9		141		8		57		86		4			13		310		167.0	
11/30/2023	14	60	9.9		137		14		86		83		4			13		310		168.0	
11/30/2023	15	60	9.8		141		4		67		94		3	4		13	13	310	310	167.4	166.8
11/30/2023	16	60	10.0		141		28		162		83		4			13		310		165.3	
11/30/2023	17	60	9.6		141		3		62		96		4			13		310		167.7	
11/30/2023	18	60	9.7		138		6		72		91		4			13		310		167.7	
11/30/2023	19	60	10.0		139		14		98		86		4	4		13		310	310	167.3	167.0
11/30/2023	20	60	9.8		140		26		164		84		4			13		310		167.0	
11/30/2023	21	60	9.6		141		5		85		94		3			13		310		168.5	
11/30/2023	22	60	10.0		139		5		76		93		3			14		310		167.4	
11/30/2023	23	60	9.8		140		1		60		98		4	3		13	13	310	310	167.2	167.5

Average: Geometric Mean Average:	140	2	OR	96	see above	see above	see above	see above
Limit:	≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 80% 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 30-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	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	0	IC	4	IC	0	0	0	0	0	0	1
7	0		0		0	0	0	0	0	0	0
8	0		0		0	0	0	0	0	0	0
9	0		0		0	0	0	0	0	0	0
10	0		0		0	0	0	0	0	0	0
11	0	I	0		0	0	0	0	0	0	0
12	0		0		0	0	0	0	0	0	0
13	0		0		0	0	0	0	0	0	0
14	0		0		0	0	0	0	0	0	0
15	0		0		0	0	0	0	0	0	0
16	0		0		0	0	0	0	0	0	0
17	0		0		0	0	0	0	0	0	0
18	0		0		0	0	0	0	0	0	0
19	0		0		0	0	0	0	0	0	0
20	0		0		0	0	0	0	0	0	0
21	0		0		0	0	0	0	0	0	0
22	0		0		0	0	0	0	0	0	0
23	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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 30-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	2	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	0	IBC	0	IBC	0	0	0	0	0	0	0
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