



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



Date 8/25/22

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.
8/25/2022	0	60	10.7		136		13		73		82		6			14		310		165.6	
8/25/2022	1	60	10.6		143		13		57		77		6			14		310		165.9	
8/25/2022	2	60	10.5		141		21		90		77		6			15		310		166.0	
8/25/2022	3	60	10.6		140		21		57		63		6	6		15		312	311	164.9	165.6
8/25/2022	4	60	10.7		142		22		78		72		5			14		310		168.0	
8/25/2022	5	60	10.6		140		15		35		58		7			14		308		157.5	
8/25/2022	6	60	10.6		140		9		40		78		6			15		308		163.4	
8/25/2022	7	60	10.5		141		10		41		76		5	6		15	14	306	308	166.0	163.7
8/25/2022	8	60	10.8		140		16		40		61		5			14		309		166.2	
8/25/2022	9	60	10.7		142		9		41		78		6			15		310		163.5	
8/25/2022	10	60	10.8		140		7		45		84		5			14		309		165.9	
8/25/2022	11	60	10.3		140		8		46		82		6	5		15		310	310	166.9	165.6
8/25/2022	12	60	10.5		142		15		70		79		6			15		309		165.7	
8/25/2022	13	60	10.6		140		11		64		82		5			15		309		168.1	
8/25/2022	14	60	10.8		141		10		45		77		6			14		311		166.2	
8/25/2022	15	60	10.6		141		2		29		93		6	6		14	14	308	309	164.5	166.1
8/25/2022	16	60	10.7		140		12		60		80		5			14		312		165.4	
8/25/2022	17	60	10.4		139		18		77		77		6			14		313		168.1	
8/25/2022	18	60	10.5		142		6		42		86		5			14		311		165.1	
8/25/2022	19	60	10.5		139		5		40		87		5	5		14		312	312	165.7	166.1
8/25/2022	20	60	10.5		142		12		54		78		5			15		311		166.5	
8/25/2022	21	60	10.6		140		14		53		74		5			15		314		165.6	
8/25/2022	22	60	10.5		141		12		51		77		5			14		313		165.5	
8/25/2022	23	60	10.6		139		7		32		78		5	5		14	14	316	314	165.7	165.8

Average: Geometric Mean Average:	141	11	OR	79	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

- 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 8/25/22

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.
8/25/2022	0	60	10.5		139		18		50		64		3			14		310		167.0	
8/25/2022	1	60	10.7		138		13		40		67		3			14		310		166.6	
8/25/2022	2	60	10.5		140		24		71		66		3			14		310		166.2	
8/25/2022	3	60	10.6		141		22		63		66		3	3		14		310	310	167.6	166.8
8/25/2022	4	60	10.6		141		22		54		59		5			13		310		166.9	
8/25/2022	5	60	10.5		140		13		31		60		5			13		311		166.7	
8/25/2022	6	60	10.5		139		10		31		66		5			13		311		165.0	
8/25/2022	7	60	10.7		135		5		29		83		4	5		15	14	314	312	168.0	166.7
8/25/2022	8	60	10.9		136		4		27		87		3			15		310		166.5	
8/25/2022	9	60	10.8		141		4		31		85		5			14		311		165.8	
8/25/2022	10	60	11.0		140		20		70		72		4			14		309		167.5	
8/25/2022	11	60	10.2		160		3		26		88		4	4		15		311	310	166.3	166.5
8/25/2022	12	60	10.6		134		15		62		76		15			15		310		167.0	
8/25/2022	13	60	10.7		137		9		56		83		6			15		310		166.7	
8/25/2022	14	60	10.9		139		9		37		75		6			15		313		164.5	
8/25/2022	15	60	10.8		141		4		30		86		5	8		14	15	308	310	166.3	166.1
8/25/2022	16	60	10.8		139		7		40		84		4			15		311		167.7	
8/25/2022	17	60	10.8		138		12		68		82		4			14		308		166.4	
8/25/2022	18	60	10.8		139		12		53		78		4			15		309		167.2	
8/25/2022	19	60	10.9		143		5		35		87		4	4		14		307	309	167.4	167.2
8/25/2022	20	60	11.0		138		7		43		83		5			14		309		166.2	
8/25/2022	21	60	10.9		139		9		42		79		5			15		314		165.6	
8/25/2022	22	60	10.9		140		20		67		70		5			15		317		167.1	
8/25/2022	23	60	10.9		140		17		52		67		4	4		15	15	317	314	168.6	166.9

Average:
Geometric Mean Average:

Limit:

140	10
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

77
≥ 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

°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 25-Aug-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	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

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 25-Aug-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	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	IBC	5	IBC	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

Status Flags

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