



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



Date 5/5/22

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.
5/5/2022	0	60	10.0		155		10		49		80		6			14		307		167.7	
5/5/2022	1	60	10.0		154		20		62		67		6			14		305		165.7	
5/5/2022	2	60	10.1		167		22		60		64		7			14		308		166.3	
5/5/2022	3	60	9.9		164		24		52		54		5	6		13		311	308	168.3	167.0
5/5/2022	4	60	9.9		166		21		52		60		5			13		314		167.4	
5/5/2022	5	60	10.0		162		22		51		58		9			13		316		169.0	
5/5/2022	6	60	9.9		158		16		32		49		7			14		316		167.6	
5/5/2022	7	60	10.0		153		9		27		68		6	7		14	14	320	316	167.6	167.9
5/5/2022	8	60	10.0		146		11		30		64		6			14		315		168.0	
5/5/2022	9	60	10.1		151		13		33		61		6			13		308		166.0	
5/5/2022	10	60	9.9		173		22		30		25	IBCM	7			13		317		167.7	
5/5/2022	11	60	10.4		171		20		86	IBCM	77	IBCM	5	6		13		311	313	166.3	167.0
5/5/2022	12	60	10.1		167		13		31		59		6			13		307		167.1	
5/5/2022	13	60	9.9		167		19		31		41		6			14		315		168.1	
5/5/2022	14	60	10.3		184		18		37		51		4			13		312		169.1	
5/5/2022	15	60	10.2		172		13		38		67		5	5		14	13	312	312	166.7	167.7
5/5/2022	16	60	9.9		165		13		40		67		6			13		308		168.3	
5/5/2022	17	60	10.1		160		7		33		79		6			14		304		168.1	
5/5/2022	18	60	10.3		168		18		43		58		5			14		308		167.4	
5/5/2022	19	60	10.3		175		25		61		59		6	6		14		306	307	167.8	167.9
5/5/2022	20	60	10.2		171		19		59		68		6			14		308		167.0	
5/5/2022	21	60	10.0		167		21		52		60		6			14		310		169.3	
5/5/2022	22	60	9.9		156		14		48		71		6			14		305		168.0	
5/5/2022	23	60	10.0		150		9		37		75		7	6		14	14	305	307	167.9	168.1

Average:
Geometric Mean Average:

Limit:

163	16
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

63
≥ 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

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 5/5/22

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.
5/5/2022	0	60	8.4		187		8		88		91		2			14		310		168.4	
5/5/2022	1	60	8.2		186		6		83		92		2			14		310		167.8	
5/5/2022	2	60	8.4		177		11		87		88		2			14		310		167.2	
5/5/2022	3	60	8.3		171		3		70		96		2	2		14		310	310	168.2	167.9
5/5/2022	4	60	8.2		173		5		73		94		1			14		310		168.2	
5/5/2022	5	60	8.3		179		0		59		99		0			13		310		166.7	
5/5/2022	6	60	8.4		173		0		58		100		1			13		310		167.5	
5/5/2022	7	60	8.5		193		0		45		100		0	1		13	14	310	310	167.7	167.6
5/5/2022	8	60	8.3		176		1		55		98		1			13		310		167.8	
5/5/2022	9	60	8.5		180		20		85		76		1			13		310		168.1	
5/5/2022	10	60	8.1		182		0		42		100		1			13		310		166.8	
5/5/2022	11	60	8.5		184		3		101	IBCM	97	IBCM	1	1		14		310	310	167.6	167.6
5/5/2022	12	60	8.1		180		0		42		100		1			13		310		167.9	
5/5/2022	13	60	8.1		183		0		50		100		0			14		310		168.0	
5/5/2022	14	60	8.3		194		0		49		99		0			14		310		167.5	
5/5/2022	15	60	8.3		193		7		76		91		0	0		14	14	310	310	168.2	167.9
5/5/2022	16	60	8.1		185		2		45		95		1			14		310		167.1	
5/5/2022	17	60	8.0		186		0		34		100		1			14		310		168.0	
5/5/2022	18	60	8.0		183		0		38		100		1			14		310		167.9	
5/5/2022	19	60	8.2		186		0		43		99		1	1		14		310	310	167.3	167.5
5/5/2022	20	60	8.1		172		0		36		100		1			13		310		167.7	
5/5/2022	21	60	8.1		185		0		46		100		1			14		310		167.5	
5/5/2022	22	60	8.2		181		1		48		99		0			14		310		167.9	
5/5/2022	23	60	8.1		179		1		52		99		1	1		14	14	310	310	168.8	168.0

Average: Geometric Mean Average:	182	1	OR	99	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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 05-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 05-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