



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



Date 8/3/22

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.
8/3/2022	0	39	17.7		457		19		24		19		24			6		122		0.0	
8/3/2022	1	20	17.6	IF	452	IF	21	IF	22	IBF	6	IBF	11	IF		10		153		0.0	
8/3/2022	2	60	17.4		431		20		21		6		9			13		173		8.8	
8/3/2022	3	60	13.9		236		8		11		23		3	12		13		210	168	34.5	14.4
8/3/2022	4	60	10.9		183		4		10		58		0			13		244		64.1	
8/3/2022	5	60	10.0		169		4		13		71		0			13		256		74.7	
8/3/2022	6	60	9.7		192		15		35		57		0			13		297		102.0	
8/3/2022	7	60	8.5		150		10		65		84		4	1		13	12	310	277	149.7	97.6
8/3/2022	8	60	8.2		169		24		69		66		4			13		310		165.3	
8/3/2022	9	60	8.5		163		10		66		85		4			13		309		167.1	
8/3/2022	10	60	8.7		163		5		81	IBCM	94	IBCM	5			13		310		162.8	
8/3/2022	11	60	8.4		154		8		68		88		6	5		13		310	310	166.7	165.5
8/3/2022	12	60	8.5		145		5		67		92		89			13		309		165.5	
8/3/2022	13	60	10.0		180		10		55		82		6			13		310		159.2	
8/3/2022	14	60	10.2		172		7		41		82		6			13		310		158.8	
8/3/2022	15	60	9.8		192		8		35		78		6	27		13	13	310	310	166.0	162.4
8/3/2022	16	60	10.4		176		5		29		82		6			13		310		165.8	
8/3/2022	17	60	10.5		150		5		27		81		6			13		310		166.3	
8/3/2022	18	60	10.2		140		3		40		92		41			13		308		162.8	
8/3/2022	19	60	9.8		186		1		59		99		4	14		13		304	308	163.1	164.5
8/3/2022	20	60	9.5		191		1		44		98		4			13		311		165.0	
8/3/2022	21	60	9.5		177		0		41		99		3			13		305		166.2	
8/3/2022	22	60	9.4		175		0		40		100		4			13		300		163.9	
8/3/2022	23	60	9.2		181		0		43		100		4	4		13	13	305	305	165.4	165.1

Average: Geometric Mean Average:	197	3	OR	91	see above	see above	see above	see above			
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 4-HR Block Average	ppmc	≥ 12 8-HR. Block Average	lb/hr	≤ 345 °F 4-HR Block Average	≤ 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 8/3/22

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.
8/3/2022	0	60	10.9		176		6		22		72		16			13		310		166.3	
8/3/2022	1	60	10.8		187		1		7		78		3			13		310		163.8	
8/3/2022	2	60	10.4		177		2		7		77		3			12		310		165.7	
8/3/2022	3	60	10.6		182		1		6		82		3	6		13		310	310	163.1	164.7
8/3/2022	4	60	10.6		174		3		9		70		4			14		310		165.1	
8/3/2022	5	60	10.6		165		4		19		79		3			12		310		164.2	
8/3/2022	6	60	10.7		173		2		13		85		3			14		310		164.5	
8/3/2022	7	60	10.9		182		7		32		77		4	3		13	13	310	310	164.4	164.5
8/3/2022	8	60	10.7		159		2		16		89		4			14		310		163.5	
8/3/2022	9	60	10.5		180		1		17		92		3			14		311		165.9	
8/3/2022	10	60	10.5		178		1		85	IBCM	98	IBCM	4			14		310		164.9	
8/3/2022	11	60	10.1		176		2		28		93		3	4		14		311	310	168.1	165.6
8/3/2022	12	60	10.1		180		3		29		91		3			14		310		164.5	
8/3/2022	13	60	10.1		177		3		37		92		3			14		310		162.8	
8/3/2022	14	60	9.8		171		3		24		89		3			13		310		166.9	
8/3/2022	15	60	9.8		174		0		14		99		3	3		14	14	310	310	165.8	165.0
8/3/2022	16	60	9.8		179		1		22		98		2			14		310		165.1	
8/3/2022	17	60	9.9		185		1		18		94		3			14		311		165.3	
8/3/2022	18	60	10.0		176		6		45		87		2			14		310		166.1	
8/3/2022	19	60	9.9		181		2		29		95		3	2		14		310	310	165.2	165.4
8/3/2022	20	60	10.2		180		0		27		98		2			14		310		165.4	
8/3/2022	21	60	10.3		182		1		29		96		3			14		310		166.5	
8/3/2022	22	60	10.2		178		1		28		97		3			14		310		164.8	
8/3/2022	23	60	10.2		181		0		24		99		2	3		14	14	310	310	164.8	165.4

Average: Geometric Mean Average:	177	2	OR	92	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

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 03-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	IF	1	IF	1		1		1		1		1		1		1		1		1	1
1	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1		1		1	IF	1	1
2	1		1		1		1		1		1		1		1		1		1		1	1
3	1		1		1		1		1		1		1		0		1		1		1	1
4	1		1		0		0		0		0		0		0		0		0		0	0
5	0		0		1		0		0		1		1		1		1		1		1	0
6	2	IC	5	IC	1		1		1		1		1		1		1		1		1	1
7	1		1		1		1		1		1		1		1		1		1		1	1
8	1		1		1		1		1		1		1		1		1		1		1	1
9	1		1		1		1		1		1		1		1		1		1		1	1
10	1		1		1		1		1		1		1		1		1		1		1	1
11	1		1		1		1		1		1		1		1		1		1		1	1
12	1		1		1		1		1		1		1		1		1		1		1	1
13	1		1		1		1		1		1		1		1		1		1		1	1
14	1		1		1		1		1		1		1		1		1		1		1	1
15	1		1		1		1		1		1		1		1		1		1		1	1
16	1		1		1		1		1		1		1		1		1		1		1	1
17	1		1		1		1		1		1		1		1		1		1		1	1
18	1		1		1		1		1		1		1		1		1		1		1	1
19	1		1		1		1		1		1		1		1		1		1		1	1
20	1		1		1		1		1		1		1		1		1		1		1	1
21	1		1		1		1		1		1		1		1		1		1		1	1
22	1		1		1		1		1		1		1		1		1		1		1	1
23	1		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 03-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	0	0	0	1	1	1	1	1	0	1	1
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	1	IBC	5	IBC	0	0	0	1	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	1	1	1	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	0	1	1	1	1	1	1	1	1	1	0
12	1	1	1	1	1	1	1	1	1	1	1
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	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	1	1	1	1	1	1	0	0	1	0
19	0	0	0	0	0	0	1	0	1	0	0
20	0	0	0	0	0	0	0	0	0	0	0
21	0	1	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