



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



Date 6/1/22

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.
6/1/2022	0	60	10.5		185		8		41		81		3			14		304		164.5	
6/1/2022	1	60	10.6		186		6		42		85		4			13		305		155.7	
6/1/2022	2	60	10.3		197		9		46		79		2			14		305		166.3	
6/1/2022	3	60	10.5		200		9		39		77		2	3		13		304	304	165.1	162.9
6/1/2022	4	60	10.4		199		10		40		75		3			13		304		167.0	
6/1/2022	5	60	10.6		197		6		19		67		3			13		304		162.9	
6/1/2022	6	60	10.8		199		6		20		70		4			13		304		163.7	
6/1/2022	7	60	10.6		197		10		27		65		3	3		14	13	304	304	164.0	164.4
6/1/2022	8	60	10.3		197		9		35		75		4			13		305		166.3	
6/1/2022	9	60	10.7		181		10		43		76		4			13		304		164.3	
6/1/2022	10	60	10.7		197		19		47	IBM	59	IBM	4			13		304		161.7	
6/1/2022	11	60	10.5		199		14		56	IBCM	75	IBCM	3	4		14		305	304	165.8	164.5
6/1/2022	12	60	10.2		198		7		27		76		4			13		304		166.7	
6/1/2022	13	60	10.4		193		8		31		74		3			13		304		167.5	
6/1/2022	14	60	10.7		196		9		29		68		3			13		305		162.6	
6/1/2022	15	60	10.5		196		10		29		66		3	3		13	13	304	304	164.8	165.4
6/1/2022	16	60	10.3		193		5		30		83		4			13		304		165.0	
6/1/2022	17	60	10.3		196		6		37		85		5			13		304		165.2	
6/1/2022	18	60	10.3		199		11		39		71		4			13		304		164.1	
6/1/2022	19	60	10.4		195		4		29		87		2	3		14		304	304	165.6	165.0
6/1/2022	20	60	10.3		199		6		35		83		3			13		305		164.5	
6/1/2022	21	60	10.1		199		7		35		80		4			13		304		167.3	
6/1/2022	22	60	10.2		200		8		38		79		4			13		304		165.7	
6/1/2022	23	60	10.2		197		6		34		82		3	3		15	14	304	304	164.4	165.5

Average:
Geometric Mean Average:

Limit:

196	8
≤ 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 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 6/1/22

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.
6/1/2022	0	60	10.3		197		1		28		98		0			14		319		165.5	
6/1/2022	1	60	10.4		197		1		37		98		0			14		321		165.0	
6/1/2022	2	60	10.2		191		1		28		98		0			13		314		167.4	
6/1/2022	3	60	10.3		188		1		27		98		1	0		14		311	316	164.9	165.7
6/1/2022	4	60	10.2		194		1		23		94		1			14		319		166.9	
6/1/2022	5	60	10.4		195		1		23		94		0			14		316		166.0	
6/1/2022	6	60	10.9		195		1		18		92		0			13		315		164.1	
6/1/2022	7	60	10.5		190		1		28		95		0	0		14	14	304	314	163.1	165.0
6/1/2022	8	60	10.3		197		1		53		98		0			13		305		164.9	
6/1/2022	9	60	10.5		193		1		79		98		0			14		307		165.9	
6/1/2022	10	60	10.4		198		1		80	IBM	98	IBM	0			14		311		165.0	
6/1/2022	11	60	10.3		192		4		61	IBCM	94	IBCM	0	0		14		307	308	166.1	165.5
6/1/2022	12	60	10.2		196		2		41		95		0			14		306		165.8	
6/1/2022	13	60	10.6		195		5		60		92		0			14		296		165.7	
6/1/2022	14	60	10.5		197		8		50		84		0			12		307		166.0	
6/1/2022	15	60	10.4		198		6		40		84		0	0		12	13	309	305	165.4	165.7
6/1/2022	16	60	10.4		199		5		38		88		0			16		312		165.4	
6/1/2022	17	60	10.2		197		7		36		80		0			16		318		166.3	
6/1/2022	18	60	10.3		194		7		46		84		0			15		315		165.9	
6/1/2022	19	60	10.3		198		8		42		82		0	0		13		315	315	165.6	165.8
6/1/2022	20	60	10.2		198		5		39		87		0			13		313		165.3	
6/1/2022	21	60	10.3		197		6		43		85		0			12		309		165.9	
6/1/2022	22	60	10.3		197		8		43		82		0			13		312		165.3	
6/1/2022	23	60	10.3		197		8		37		78		0	0		12	14	312	311	165.2	165.4

Average: Geometric Mean Average:	195	3	OR	93	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 01-Jun-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	3
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 01-Jun-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	0	1	1	1	0	0
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	0	0	0	1	1	1	1	1	1	0
5	1	1	0	0	0	0	1	1	1	0	0
6	2	IBC	5	IBC	1	0	0	0	0	0	1
7	1	1	1	1	1	1	1	1	0	1	1
8	1	1	1	1	1	1	1	1	0	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	0	0	1	1
14	0	0	0	0	0	0	0	0	1	0	0
15	0	0	0	1	1	1	1	1	1	1	0
16	1	0	0	1	0	1	1	1	1	1	0
17	1	1	1	1	0	0	0	1	1	0	0
18	1	1	1	1	1	1	1	1	1	1	1
19	1	1	1	1	1	1	1	0	0	1	0
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