



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



Date 9/1/22

Wheel Plant Wheelabrator North Andover
Unit 1 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.	4 Hr Block
9/1/2022	0	0	21.0	IF	44	IF	7	IF	-79	IBF	0	IBF	0	IF		0		84		0.0		
9/1/2022	1	0	21.0	IF	45	IF	7	IF	-59	IBF	0	IBF	0	IF		0		83		0.0		
9/1/2022	2	0	21.0	IF	46	IF	7	IF	-54	IBF	0	IBF	0	IF		0		82		0.0		
9/1/2022	3	5	20.1	ICF	44	ICF	7	ICF	-38	IBF	0	IBCF	0	ICF	0	ICF	0	81	82	0.0	0.0	
9/1/2022	4	12	17.4	IBCF	219	IBCF	66	IBCF	-17	IBF	0	IBCF	546	IBCF		0		81		0.0		
9/1/2022	5	0	21.0	IF	50	IF	8	IF	154	IBCF	95	IBCF	0	IF		0		81		0.0		
9/1/2022	6	0	21.0	IF	51	IF	7	IF	-2	IBF	0	IBF	0	IF		1		81		0.0		
9/1/2022	7	0	21.0	IF	50	IF	7	IF	-12	IBF	0	IBF	0	IF	136	IBCF	0	82	81	0.0	0.0	
9/1/2022	8	0	21.0	IF	49	IF	7	IF	-26	IBF	0	IBF	0	IF		0		82		0.0		
9/1/2022	9	0	21.0	IF	48	IF	8	IF	-23	IBF	0	IBF	0	IF		0		82		0.0		
9/1/2022	10	0	21.0	IF	45	IF	8	IF	-41	IBF	0	IBF	0	IF		0		82		0.0		
9/1/2022	11	0	20.9	IF	44	IF	8	IF	-79	IBF	0	IBF	0	IF	0	IF	0	83	82	0.0	0.0	
9/1/2022	12	0	20.4	IF	59	IF	25	IF	7	IBF	0	IBF	3	IF		0		98		0.0		
9/1/2022	13	0	20.6	IF	64	IF	7	IF	10	IBF	24	IBF	2	IF		1		129		0.0		
9/1/2022	14	0	19.7	IF	1006	IF	70	IF	2	IBF	0	IBF	43	IF		0		154		0.0		
9/1/2022	15	42	17.5		472		22		0		0		23		23	6	6	188	188	4.5	4.5	
9/1/2022	16	60	16.9		407		19		0		0		8			17		205		13.8		
9/1/2022	17	60	12.8		237		8		4		0		0			16		236		43.2		
9/1/2022	18	60	11.4		201		6		4		0		0			17		254		64.2		
9/1/2022	19	60	11.6		223		7		11		33		0	2		16		267	240	63.3	46.1	
9/1/2022	20	60	9.9		211		5		79		94		21			10		291		128.5		
9/1/2022	21	60	9.8		100		19		63		70		9			18		314		164.8		
9/1/2022	22	60	9.7		113		35		97		64		9			13		317		164.6		
9/1/2022	23	60	10.0		193		42		90		53		4	11		15	15	312	308	163.8	155.4	

Average:	240	14	0			
Geometric Mean Average:					see above	see above
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean	OR	≥ 75% Removal Efficiency	≤ 69 ppmc 4-HR Block Average	see above
					≥ 12 lb/hr 8-HR. Block Average	see above
						≤ 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 9/1/22

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.
9/1/2022	0	60	11.0		175		23		31		24		3			13		313		167.1	
9/1/2022	1	60	10.9		173		18		29		40		4			15		309		165.9	
9/1/2022	2	60	10.7		170		17		24		30		4			15		305		167.9	
9/1/2022	3	60	10.6		171		16		35		54		3	3		15		303	308	166.0	166.7
9/1/2022	4	60	9.9		172		29		44		35		6			16		313		166.8	
9/1/2022	5	60	10.2		153		24		24		1		5			23		313		167.4	
9/1/2022	6	60	10.4		162		15		20		26		5			6		307		164.2	
9/1/2022	7	60	11.1		166		56		40		0		19	9		17	15	302	309	161.6	165.0
9/1/2022	8	60	11.7		157		15		18		19		8			20		294		155.0	
9/1/2022	9	60	11.2		158		24		47		49		11			23		300		165.6	
9/1/2022	10	60	10.9		165		25		30		18		8			17		301		167.0	
9/1/2022	11	60	10.7		172		21		23		12		5	8		0		304	300	167.4	163.7
9/1/2022	12	60	11.0		112		8		17		50		6			0		301		164.1	
9/1/2022	13	60	10.5		71		4		10		66		7			19		308		163.0	
9/1/2022	14	60	10.6		81		5		16		66		7			26		310		165.3	
9/1/2022	15	60	10.6		81		6		19		70		7	7		17	15	311	307	164.4	164.2
9/1/2022	16	60	10.5		81		3		10		67		7			17		314		164.4	
9/1/2022	17	60	10.4		90		4		13		73		6			17		316		165.8	
9/1/2022	18	60	10.6		163		2		9		72		6			17		316		163.6	
9/1/2022	19	60	11.1		167		3		11		72		6	6		17		322	317	166.5	165.1
9/1/2022	20	60	11.2		166		2		9		72		6			14		308		162.6	
9/1/2022	21	60	11.3		158		3		11		71		7			15		316		165.3	
9/1/2022	22	60	11.6		154		6		23		75		8			15		309		164.0	
9/1/2022	23	60	11.4		146		6		23		73		8	7		15	16	307	310	165.1	164.3

Average:
Geometric Mean Average:

Limit:

144	9
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

52
≥ 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

Status Flags

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 01-Sep-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	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
1	1	IF	0	IF	0	IF	0	IF	1	IF	1	IF	0	IF	0	IF	0	IF	1	IF	0
2	0	IF	1	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
3	0	IF	0	IF	0	IF	1	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
4	0		0		0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
5	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
6	3	ICF	23	ICF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	3
7	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
8	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
9	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
10	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
11	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
12	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
13	0	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	0
14	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
15	0	IF	1	IF	0	IF	1		1		1		0		1		1		1		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		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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 01-Sep-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	2	2	2	2	2	2	2	2	2	2	2
1	2	2	2	2	2	3	3	2	2	3	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	3	3	3	3	3	3	3	3
5	3	3	2	2	2	2	2	2	2	2	2
6	2	IBC	7	IBC	3	3	3	2	2	3	3
7	3	2	2	2	2	3	4	4	3	3	3
8	2	2	2	2	3	3	2	2	2	3	2
9	2	2	2	2	2	2	2	2	3	2	2
10	2	2	2	2	2	2	2	2	2	2	2
11	2	2	2	2	3	2	2	2	2	2	2
12	2	2	2	2	2	2	2	3	2	2	2
13	2	3	3	3	3	3	3	3	3	3	3
14	3	3	3	3	3	3	3	3	3	3	3
15	3	3	3	3	3	3	3	3	3	3	3
16	2	2	3	3	3	2	3	3	3	2	2
17	3	2	3	3	3	3	3	3	3	3	3
18	3	2	2	2	2	2	3	3	3	2	2
19	3	3	3	2	2	2	2	2	2	2	2
20	2	2	2	2	3	3	2	2	3	3	2
21	3	3	3	2	2	2	3	2	2	2	2
22	2	2	2	2	2	3	3	3	2	3	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
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