



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



Date 5/10/22

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.	4 Hr Block
5/10/2022	0	60	10.1	IT	160	IT	8	IT	28		72	IBT	8	IT			14		312		167.0	
5/10/2022	1	60	10.1	IT	169	IT	9	IT	28		69	IBT	7	IT			14		306		166.7	
5/10/2022	2	60	10.1	IT	173	IT	14	IT	28		51	IBT	8	IT			13		309		166.4	
5/10/2022	3	60	10.1	ICT	174	ICT	16	ICT	28		42	IBCT	8	ICT	8	ICT	14		314	310	165.8	166.5
5/10/2022	4	60	9.4	IBCT	140	IBCT	28	IBCT	47		40	IBCT	176	IBCT			13		312		165.7	
5/10/2022	5	60	10.1	IT	152	IT	24	IT	37		37	IBCT	14	IT			13		314		168.5	
5/10/2022	6	60	10.0	IT	145	IT	17	IT	20		15	IBT	17	IT			13		312		168.6	
5/10/2022	7	60	10.1	IT	140	IT	10	IT	12		15	IBMT	16	IT	56	IBCT	13	14	312	313	167.8	167.7
5/10/2022	8	60	10.3	IBCMT	135	IBCMT	4	IBCMT	20	IBM	80	IBCMT	16	IBCMT			13		308		166.3	
5/10/2022	9	60	5.3	IBCMT	110	IBCMT	60	IBCMT	24		0	IBCMT	186	IBCMT			14		309		169.4	
5/10/2022	10	60	10.6		173		2		21		92		9				13		308		167.6	
5/10/2022	11	60	10.5		168		3		30		89		7		8		14		303	307	166.5	167.5
5/10/2022	12	60	10.7		175		4		25		84		7				13		311		165.8	
5/10/2022	13	60	10.5		161		5		27		83		7				13		312		167.9	
5/10/2022	14	60	10.4		170		8		33		77		8				14		310		168.7	
5/10/2022	15	60	10.2		172		3		24		86		9		8		14	14	308	310	166.1	167.1
5/10/2022	16	60	10.4		172		3		25		89		8				13		303		166.5	
5/10/2022	17	60	10.9		172		5		35		85		12				13		300		166.6	
5/10/2022	18	60	10.7		181		10		37		74		10				14		307		167.0	
5/10/2022	19	60	10.5		181		13		33		60		9		10		13		313	306	167.5	166.9
5/10/2022	20	60	10.2		181		14		35		59		9				13		315		170.6	
5/10/2022	21	60	10.3		181		13		37		64		9				13		308		168.7	
5/10/2022	22	60	10.2		174		13		27		54		9				14		308		169.6	
5/10/2022	23	60	10.2		160		6		28		80		9		9		13	14	302	308	166.8	168.9

Average:
Geometric Mean Average:

Limit:

173	6
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

80
≥ 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

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 5/10/22

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.	4 Hr Block
5/10/2022	0	60	9.8	IT	198	IT	3	IT	41		93	IBT	2	IT			14		310		167.8	
5/10/2022	1	60	9.8	IT	197	IT	8	IT	54		85	IBT	2	IT			13		310		167.0	
5/10/2022	2	60	9.7	IT	197	IT	1	IT	18		96	IBT	1	IT			12		310		167.9	
5/10/2022	3	60	9.9	ICT	187	ICT	2	ICT	28		93	IBCT	3	ICT	2	ICT	14		310	310	167.4	167.5
5/10/2022	4	60	9.1	IBCT	147	IBCT	3	IBCT	25		86	IBCT	164	IBCT			15		310		167.5	
5/10/2022	5	60	10.0	IT	196	IT	2	IT	19		92	IBCT	1	IT			14		310		166.9	
5/10/2022	6	60	9.9	IT	197	IT	1	IT	16		93	IBT	2	IT			14		310		168.3	
5/10/2022	7	60	9.8	IT	195	IT	1	IT	19		93	IBMT	2	IT	42	IBCT	14	14	310	310	167.0	167.4
5/10/2022	8	60	9.9	IMT	190	IMT	1	IMT	31	IBM	97	IBMT	1	IMT			14		310		166.9	
5/10/2022	9	60	10.0		193		2		24		93		4				14		310		167.9	
5/10/2022	10	60	10.0		192		1		24		94		1				14		310		168.0	
5/10/2022	11	60	9.7		194		1		13		91		1	2			13		310	310	168.2	167.7
5/10/2022	12	60	9.8		196		2		23		93		1				13		310		167.3	
5/10/2022	13	60	9.8		194		2		36		94		0				12		310		168.4	
5/10/2022	14	60	10.0		195		11		33		68		1				12		310		167.4	
5/10/2022	15	60	10.0		197		3		19		83		0	1			13	13	310	310	167.7	167.7
5/10/2022	16	60	9.9		197		1		18		94		1				14		310		167.1	
5/10/2022	17	60	10.1		198		1		14		92		1				15		310		168.0	
5/10/2022	18	60	9.9		197		1		22		94		1				14		310		167.6	
5/10/2022	19	60	9.8		197		2		19		92		1	1			15		310	310	167.7	167.6
5/10/2022	20	60	9.9		197		2		21		91		1				14		310		168.2	
5/10/2022	21	60	9.8		201		14		41		66		1				15		310		168.7	
5/10/2022	22	60	10.0		194		6		27		76		2				15		310		166.4	
5/10/2022	23	60	9.9		196		1		24		94		2	1			15	15	310	310	167.4	167.7

Average:
Geometric Mean Average:

Limit:

196	2
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

90
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

see above
≤ 12 8-HR. Block Average

see above
≤ 345 °F 4-HR Block Average

see above
≤ 173 4-HR Block Average

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 10-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 10-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