



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



Date 8/10/22

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.
8/10/2022	0	60	9.3		150		17		67		75		3			13		316		167.0	
8/10/2022	1	60	9.4		148		17		86		80		4			13		315		165.3	
8/10/2022	2	60	9.6		154		9		81		88		4			13		306		160.6	
8/10/2022	3	60	9.4		149		13		89		85		4	4		12		301	310	165.2	164.5
8/10/2022	4	60	9.2		148		13		66		81		5			11		303		162.6	
8/10/2022	5	60	9.3		141		15		68		78		4			13		310		164.7	
8/10/2022	6	60	9.6		153		20		70		72		3			16		311		166.2	
8/10/2022	7	60	9.5		145		23		66		65		4	4		10	13	317	310	167.0	165.1
8/10/2022	8	60	9.5		153		20		61		66		3			13		312		164.1	
8/10/2022	9	60	9.8		172		27		100		73		6			14		312		163.8	
8/10/2022	10	60	9.7		155		31		122		74		5			13		318		165.2	
8/10/2022	11	60	9.8		147		17		64		73		5	5		18		315	314	166.4	164.9
8/10/2022	12	60	10.0		177		19		65		71		3			6		303		161.8	
8/10/2022	13	60	9.7		178		22		69		69		4			16		308		162.9	
8/10/2022	14	60	9.4		177		22		78		72		5			15		321		164.7	
8/10/2022	15	60	9.4		169		15		52		71		4	4		14	14	315	312	165.7	163.8
8/10/2022	16	60	9.1		163		14		59		77		6			12		315		161.4	
8/10/2022	17	60	9.4		153		19		94		80		5			15		306		165.0	
8/10/2022	18	60	9.6		151		25		109		77		17			15		303		162.9	
8/10/2022	19	60	9.4		157		20		87		77		6	8		15		303	307	165.2	163.6
8/10/2022	20	60	9.2		164		18		51		65		5			14		308		164.0	
8/10/2022	21	60	9.2		162		21		53		60		4			14		314		166.2	
8/10/2022	22	60	9.1		170		16		46		66		4			14		315		164.6	
8/10/2022	23	60	9.2		165		19		57		67		4	4		14	14	311	312	166.5	165.3

Average:
Geometric Mean Average:

Limit:

158	18
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

74
≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

see above
≥ 12 lb/hr 8-HR. Block Average

see above
≤ 345 °F 4-HR Block Average

see above
≤ 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 8/10/22

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
8/10/2022	0	22	17.7	IF	297	IF	42	IF	15	IBF	0	IBF	5202	IF		2		292		32.2		
8/10/2022	1	0	19.5	IF	470	IF	142	IF	103	IBF	0	IBF	7217	IF		0		258		19.5		
8/10/2022	2	0	20.1	IF	33	IF	14	IF	154	IBF	91	IBF	491	IF		0		253		15.7		
8/10/2022	3	5	19.6	ICF	261	ICF	127	ICF	201	IBF	37	IBCF	3491	ICF	4101	ICF	0	231	259	9.5	19.2	
8/10/2022	4	12	17.1	IBCF	110	IBCF	69	IBCF	395	IBF	83	IBCF	1120	IBCF		0		230		9.0		
8/10/2022	5	0	20.7	IF	14	IF	7	IF	168	IBCF	96	IBCF	136	IF		0		201		9.4		
8/10/2022	6	0	20.6	IF	19	IF	8	IF	605	IBF	99	IBF	187	IF		0		189		7.8		
8/10/2022	7	0	20.8	IF	12	IF	6	IF	-624	IBF	0	IBF	92	IF	383	IBCF	0	0	176	199	3.4	7.4
8/10/2022	8	0	20.9	IF	9	IF	6	IF	-234	IBF	0	IBF	50	IF		0		166		0.2		
8/10/2022	9	0	21.0	IF	7	IF	5	IF	-77	IBF	0	IBF	17	IF		0		160		0.0		
8/10/2022	10	0	21.0	IF	5	IF	5	IF	-57	IBF	0	IBF	0	IF		0		158		0.0		
8/10/2022	11	0	21.0	IF	4	IF	5	IF	-50	IBF	0	IBF	0	IF	17	IF		156	160	0.0	0.1	
8/10/2022	12	0	21.0	IF	3	IF	5	IF	-42	IBF	0	IBF	0	IF		0		154		0.0		
8/10/2022	13	0	21.0	IF	3	IF	5	IF	-38	IBF	0	IBF	0	IF		0		153		0.0		
8/10/2022	14	0	20.8	IF	8	IF	7	IF	-118	IBF	0	IBF	14	IF		0		155		0.0		
8/10/2022	15	0	16.4	IF	137	IF	24	IF	5	IBF	0	IBF	111	IF	31	IF	10	1	193	164	6.0	1.5
8/10/2022	16	0	14.4	IF	135	IF	7	IF	17	IBF	56	IBF	13	IF		13		220		19.8		
8/10/2022	17	0	12.0	IF	90	IF	6	IF	8	IBF	20	IBF	5	IF		13		242		39.4		
8/10/2022	18	0	10.8	IF	79	IF	5	IF	4	IBF	0	IBF	1	IF		13		257		55.8		
8/10/2022	19	30	12.0		161		98		76		0		9		9		13		317	317	95.6	95.6
8/10/2022	20	60	10.6		171		26		61		58		5			15		318		154.7		
8/10/2022	21	60	10.3		184		13		34		61		3			16		311		167.1		
8/10/2022	22	60	10.2		181		14		47		70		3			17		311		166.5		
8/10/2022	23	60	10.5		182		14		56		75		3		4		16	15	311	313	164.9	163.3

Average: Geometric Mean Average:	176	23	OR	56	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 10-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	1	1	1	1	1	1	1	1	1	1
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	1	1	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	1	1	1	1
6	2	IC	5	IC	1	1	1	1	1	1	1
7	1	1	1	1	1	1	1	1	1	1	1
8	1	1	1	1	1	1	1	1	1	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	1	1	1	1
14	1	1	1	1	1	1	1	1	1	1	1
15	1	1	1	1	1	1	1	1	1	1	1
16	1	1	1	1	1	1	1	1	1	1	1
17	1	1	1	1	1	1	1	1	1	1	1
18	1	1	1	1	1	1	1	1	1	1	1
19	1	1	1	1	1	1	1	1	1	1	1
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



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



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

Status Flags

I - Invalid C - Calibration F - Offline T - Out of Control ^ - Startup
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown