



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



Date 8/29/22

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
8/29/2022	0	0	20.9	IF	57	IF	8	IF	-268	IBF	0	IBF	7	IF			1		239		7.6	
8/29/2022	1	0	20.9	IF	59	IF	8	IF	-244	IBF	0	IBF	9	IF			2		214		0.0	
8/29/2022	2	0	21.0	IF	59	IF	7	IF	-204	IBF	0	IBF	8	IF			1		205		0.0	
8/29/2022	3	5	20.1	ICF	55	ICF	6	ICF	-176	IBF	0	IBCF	5	ICF	7	ICF	0		194	213	0.0	1.9
8/29/2022	4	12	17.4	IBCF	245	IBCF	64	IBCF	-172	IBF	0	IBCF	545	IBCF			0		193		0.0	
8/29/2022	5	0	21.0	IF	57	IF	7	IF	166	IBCF	96	IBCF	1	IF			0		181		0.0	
8/29/2022	6	0	21.0	IF	60	IF	7	IF	-123	IBF	0	IBF	2	IF			0		173		0.0	
8/29/2022	7	0	21.0	IF	64	IF	7	IF	-122	IBF	0	IBF	0	IF	137	IBCF	0	1	155	175	0.0	0.0
8/29/2022	8	0	21.0	IF	65	IF	6	IF	-124	IBF	0	IBF	0	IF			0		139		0.0	
8/29/2022	9	0	21.0	IF	68	IF	6	IF	-132	IBF	0	IBF	1	IF			0		130		0.0	
8/29/2022	10	0	21.0	IF	66	IF	6	IF	-161	IBF	0	IBF	0	IF			0		125		0.0	
8/29/2022	11	0	21.0	IF	67	IF	6	IF	-182	IBF	0	IBF	0	IF	0	IF	0		120	129	0.0	0.0
8/29/2022	12	0	21.0	IF	65	IF	6	IF	-193	IBF	0	IBF	0	IF			0		117		0.0	
8/29/2022	13	0	21.0	IF	64	IF	6	IF	-209	IBF	0	IBF	0	IF			0		115		0.0	
8/29/2022	14	0	21.0	IF	64	IF	6	IF	-245	IBF	0	IBF	0	IF			0		115		0.0	
8/29/2022	15	0	21.0	IF	64	IF	6	IF	-249	IBF	0	IBF	0	IF	0	IF	0	0	113	115	0.0	0.0
8/29/2022	16	0	21.0	IF	63	IF	6	IF	-236	IBF	0	IBF	0	IF			0		112		0.0	
8/29/2022	17	0	21.0	IF	63	IF	6	IF	-214	IBF	0	IBF	0	IF			0		111		0.0	
8/29/2022	18	0	21.0	IF	65	IF	6	IF	-213	IBF	0	IBF	0	IF			0		111		0.0	
8/29/2022	19	0	21.0	IF	67	IF	6	IF	-206	IBF	0	IBF	0	IF	0	IF	0		110	111	0.0	0.0
8/29/2022	20	0	21.0	IF	68	IF	6	IF	-178	IBF	0	IBF	0	IF			0		108		0.0	
8/29/2022	21	0	21.0	IF	68	IF	6	IF	-174	IBF	0	IBF	0	IF			0		106		0.0	
8/29/2022	22	0	21.0	IF	68	IF	6	IF	-160	IBF	0	IBF	0	IF			0		105		0.0	
8/29/2022	23	0	20.9	IF	71	IF	6	IF	-152	IBF	0	IBF	0	IF	0	IF	0	0	103	106	0.0	0.0

Average:
Geometric Mean Average:

Limit:

71 IBCF
7 IBCF
≤ 205 24-HR Block Avg.
≤ 29 24-HR Geometric Mean

OR

0 IBCF
≥ 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 8/29/22

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.
8/29/2022	0	60	11.0		169		18		61		70		3			14		315		165.8	
8/29/2022	1	60	10.9		166		15		56		72		3			11		314		166.2	
8/29/2022	2	60	10.8		163		16		46		67		3			18		320		168.6	
8/29/2022	3	60	10.9		168		11		47		76		3	3		15		313	316	166.5	166.8
8/29/2022	4	60	11.0		169		15		43		65		5			13		319		165.2	
8/29/2022	5	60	11.0		169		12		20		39		5			13		324		165.5	
8/29/2022	6	60	11.2		186		17		15		0		5			16		324		165.6	
8/29/2022	7	60	11.4		177		6		14		54		8	6		15	14	313	320	157.8	163.5
8/29/2022	8	60	11.3		171		12		15		21		9			15		319		164.7	
8/29/2022	9	60	11.8		189		13		28		52		8			15		310		159.8	
8/29/2022	10	60	11.5		178		14		18		22		8			16		322		164.5	
8/29/2022	11	60	11.4		179		13		36		64		9	9		15		323	318	162.7	162.9
8/29/2022	12	60	11.6		164		16		34		52		10			15		316		165.7	
8/29/2022	13	60	11.6		159		14		44		69		9			16		315		164.6	
8/29/2022	14	60	11.3		177		15		31		53		9			16		311		166.0	
8/29/2022	15	60	11.6		175		24		53		54		9	9		16	16	311	313	164.2	165.1
8/29/2022	16	60	11.5		165		15		37		59		7			16		310		164.9	
8/29/2022	17	60	10.9		172		6		26		76		6			16		304		166.9	
8/29/2022	18	60	11.3		174		16		32		50		7			16		311		164.9	
8/29/2022	19	60	11.2		171		12		29		57		7	7		16		308	308	165.6	165.6
8/29/2022	20	60	11.2		174		9		16		46		7			16		311		164.5	
8/29/2022	21	60	11.2		179		23		32		27		7			16		313		166.5	
8/29/2022	22	60	11.3		175		21		24		10		8			16		315		164.5	
8/29/2022	23	60	11.3		161		4		8		49		4	7		15	16	307	312	165.0	165.1

Average:
Geometric Mean Average:

Limit:

172	13
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

54
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average ppmc

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

see above
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see above
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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 29-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	0	IF	0	IF	0	IF	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	0	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	ICF	23	ICF	0	IF	0	IF	0	IF	0	IF	1	IF	1	IF	1	IF	0	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	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
14	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1	IF	1
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	1	IF	1	IF	0	IF	1	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
19	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
20	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
21	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
22	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0
23	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0	IF	0

Status Flags

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 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 29-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	3	2	2	2	3	3	2	2	3	3	3
1	3	2	2	2	2	2	3	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	2	2	2	2	2	2	3	2	2
4	2	2	2	2	2	2	2	2	2	2	2
5	2	2	2	2	3	2	3	2	2	2	2
6	2	IBC	7	IBC	3	2	3	2	2	3	3
7	3	2	2	2	2	3	2	2	2	3	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	3	3	2	2	2	2	2	2	2	2	2
14	2	2	2	2	2	2	2	2	2	2	2
15	3	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	3	3	2	2
22	2	2	2	2	2	2	2	2	2	2	2
23	3	3	3	4	3	3	3	3	3	3	3

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