



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



Date 7/19/22

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.
7/19/2022	0	60	9.5		168		12		20		40		6			13		311		166.2	
7/19/2022	1	60	9.4		172		10		22		56		5			13		309		166.1	
7/19/2022	2	60	9.5		173		12		26		54		6			13		307		164.7	
7/19/2022	3	60	9.5		178		11		25		57		5	6		13		308	309	165.7	165.7
7/19/2022	4	60	9.6		182		19		35		47		6			13		308		165.5	
7/19/2022	5	60	9.4		177		12		28		56		7			13		308		167.8	
7/19/2022	6	60	9.7		179		0		37		99		6			13		295		166.3	
7/19/2022	7	60	9.8		183		3		34		92		6	6		14	13	285	299	165.4	166.3
7/19/2022	8	60	10.1		191		5		30		82		7			13		289		163.7	
7/19/2022	9	60	10.1		190		23		50		54		8			14		313		163.8	
7/19/2022	10	60	10.4		197		8		52		84		11			13		293		165.6	
7/19/2022	11	60	10.1		192		16		52		69		7	8		13		303	300	166.7	164.9
7/19/2022	12	60	9.8		180		17		49		65		7			13		318		165.6	
7/19/2022	13	60	10.3		189		13		61		80		10			13		310		163.3	
7/19/2022	14	60	10.0		193		17		54		68		6			13		310		163.6	
7/19/2022	15	60	10.0		186		10		53		82		8	8		13	13	311	312	163.0	163.9
7/19/2022	16	60	10.2		192		5		51		90		9			14		302		163.0	
7/19/2022	17	60	10.0		194		19		72		74		7			14		304		164.7	
7/19/2022	18	60	10.2		196		15		61		75		7			14		304		165.5	
7/19/2022	19	60	10.0		192		19		72		73		8	8		14		307	304	165.0	164.5
7/19/2022	20	60	9.9		190		11		58		81		7			14		307		165.4	
7/19/2022	21	60	10.0		191		12		60		81		7			13		306		162.8	
7/19/2022	22	60	9.9		196		14		56		74		7			14		305		165.6	
7/19/2022	23	60	10.1		190		19		60		68		7	7		13	14	310	307	164.2	164.5

Average: Geometric Mean Average:	186	10	76	OR	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

- 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 7/19/22

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.
7/19/2022	0	60	10.7		173		7		22		69		3			13		312		159.5	
7/19/2022	1	60	10.7		178		5		20		75		2			14		313		158.4	
7/19/2022	2	60	10.7		176		8		24		65		2			14		312		159.0	
7/19/2022	3	60	10.6		176		8		18		54		3	3		13		316	313	160.3	159.3
7/19/2022	4	60	10.6		178		20		39		49		4			14		316		159.9	
7/19/2022	5	60	10.7		175		6		12		48		4			13		319		160.5	
7/19/2022	6	60	10.3		187		7		12		38		3			13		322		166.2	
7/19/2022	7	60	10.4		187		9		21		56		4	4		13	14	320	319	168.8	163.9
7/19/2022	8	60	10.8		184		1		20		93		4			13		299		165.6	
7/19/2022	9	60	10.5		180		17		39		55		4			13		313		169.9	
7/19/2022	10	60	10.7		169		5		23		76		10			14		304		172.5	
7/19/2022	11	60	10.7		178		6		20		69		3	5		13		302	305	169.3	169.3
7/19/2022	12	60	10.4		182		8		23		66		3			14		309		169.3	
7/19/2022	13	60	10.5		182		10		19		47		3			15		308		167.9	
7/19/2022	14	60	10.6		185		8		5		0		4			13		310		164.5	
7/19/2022	15	60	10.5		173		15		5		0		5	4		13	14	311	309	166.8	167.1
7/19/2022	16	60	10.5		178		12		10		0		4			14		314		165.4	
7/19/2022	17	60	10.4		181		11		29		64		3			13		316		167.3	
7/19/2022	18	60	10.6		170		14		38		63		3			13		310		167.5	
7/19/2022	19	60	10.6		172		25		58		57		3	4		13		312	313	168.3	167.1
7/19/2022	20	60	10.4		181		16		34		52		3			13		315		168.1	
7/19/2022	21	60	10.4		180		17		34		51		2			13		317		165.7	
7/19/2022	22	60	10.4		180		8		42		81		3			13		312		166.6	
7/19/2022	23	60	10.5		186		8		41		81		3	3		13	13	305	312	167.2	166.9

Average: Geometric Mean Average:	179	9	OR	58	see above	see above	see above	see above			
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean		≥ 75% Removal Efficiency	≤ 69 4-HR Block Average	ppmc	≤ 12 8-HR. Block Average	lb/hr	≤ 345 °F 4-HR Block Average	≤ 173 4-HR Block Average	klb/hr

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 19-Jul-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 19-Jul-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	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	1	IBC	5	IBC	1	1	1	1	1	1	2
7	1	1	1	1	1	1	2	2	2	1	1
8	2	2	1	1	1	1	1	1	1	1	1
9	2	1	2	2	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	1	2	1	1
11	2	2	2	2	2	2	1	2	2	2	2
12	2	1	1	1	2	2	2	2	2	2	2
13	2	2	2	2	1	2	2	2	2	2	2
14	2	2	2	2	2	2	1	1	1	1	1
15	1	1	2	2	2	1	2	2	1	1	1
16	1	2	1	2	1	1	1	1	1	1	1
17	1	1	1	1	1	2	2	2	2	2	1
18	2	2	2	2	2	2	2	2	2	2	2
19	2	2	2	2	2	2	1	2	2	1	2
20	2	2	2	1	1	2	1	1	2	2	1
21	2	2	2	1	1	1	1	1	2	1	1
22	2	2	2	2	2	2	2	2	1	2	2
23	1	1	2	2	2	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