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

Wheelabrator TECHNOLOGIES

WIN WASTE INNOVATIONS
PERFORMANCE FOR THE PLANET

Date 12/31/24
NOTE: Emission & Process results may change after Startup, Shutdown, Malfunction data validation

Plant Wheelabrator North Andover
Unit Unit 1
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
12/31/2024	0	60	11.0		132		0		37		100		0				18		309		168.0	
12/31/2024	1	60	11.3		133		1		39		96		0				17		309		165.3	
12/31/2024	2	60	11.4		143		0		28		100		0				16		310		163.6	
12/31/2024	3	60	11.0		143		0		26		100		0		0		18		309	309	168.7	166.4
12/31/2024	4	60	11.4		140		1		38		96		1				15		309		166.4	
12/31/2024	5	60	11.3		140		2		41		95		0				16		309		168.2	
12/31/2024	6	60	11.2		143		0		30		100		1				14		310		166.0	
12/31/2024	7	60	11.2		138		1		37		98		1		1		13	16	309	309	168.2	167.2
12/31/2024	8	60	11.4		143		0		5		100		1				14		310		164.8	
12/31/2024	9	60	11.3		141		0		36		100		1				12		309		167.8	
12/31/2024	10	60	11.5		140		0		32		100		2				13		310		167.3	
12/31/2024	11	60	11.2		139		0		37		100		2		1		13		309	309	167.8	166.9
12/31/2024	12	60	11.3		143		0		21		100		2				13		310		166.6	
12/31/2024	13	60	11.0		141		0		12		100		1				13		310		168.8	
12/31/2024	14	60	11.3		142		0		16		100		1				13		309		167.6	
12/31/2024	15	60	11.2		140		0		19		100		1		2		13	13	310	309	167.7	167.7
12/31/2024	16	60	11.1		141		0		17		100		1				13		309		168.7	
12/31/2024	17	60	11.2		142		0		24		100		1				13		309		167.3	
12/31/2024	18	60	11.1		140		0		38		99		2				13		309		164.6	
12/31/2024	19	60	11.0		141		3		47		94		2		1		13		310	309	166.9	166.9
12/31/2024	20	60	11.1		141		1		28		98		1				13		309		167.2	
12/31/2024	21	60	11.0		142		0		36		99		2				13		309		167.0	
12/31/2024	22	60	11.0		142		0		31		100		1				13		309		168.4	
12/31/2024	23	60	11.1		141		0		32		99		1		1		13	13	309	309	168.7	167.8

Average:	140				see above	see above	see above	see above	
Geometric Mean Average:		0		100					
Limit:	≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean	OR	≥ 80% 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
DRAFT - COMPLIANCE SUMMARY REPORT

Wheelabrator TECHNOLOGIES

WIN WASTE INNOVATIONS
PERFORMANCE FOR THE PLANET

Date 12/31/24
NOTE: Emission & Process results may change after Startup, Shutdown, Malfunction data validation

Plant Wheelabrator North Andover
Unit Unit 2
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
12/31/2024	0	60	9.8		130		0		37		100		3				20		310		167.4	
12/31/2024	1	60	9.9		135		0		45		99		3				19		310		168.3	
12/31/2024	2	60	10.1		139		0		31		99		3				11		310		163.5	
12/31/2024	3	60	9.9		140		0		28		100		3		3		19		310	310	169.2	167.1
12/31/2024	4	60	10.1		140		0		34		100		3				17		310		166.5	
12/31/2024	5	60	10.0		138		0		29		100		3				19		310		167.4	
12/31/2024	6	60	9.8		139		0		28		100		3				17		310		166.9	
12/31/2024	7	60	9.8		142		0		29		100		3		3		15	17	310	310	166.9	166.9
12/31/2024	8	60	9.9		138		0		5		100		3				16		310		166.3	
12/31/2024	9	60	9.9		140		0		18		100		3				18		310		167.9	
12/31/2024	10	60	9.9		140		0		19		100		4				15		310		167.2	
12/31/2024	11	60	9.8		139		0		33		100		3		3		14		310	310	167.1	167.1
12/31/2024	12	60	9.6		138		0		27		100		4				13		310		165.7	
12/31/2024	13	60	9.6		140		0		20		100		3				13		309		167.5	
12/31/2024	14	60	9.9		139		0		22		100		3				13		310		167.7	
12/31/2024	15	60	9.9		140		0		17		100		3		3		13	14	310	310	167.1	167.0
12/31/2024	16	60	9.8		139		0		23		100		3				13		310		168.2	
12/31/2024	17	60	9.8		141		0		36		100		3				13		310		166.9	
12/31/2024	18	60	9.8		140		0		44		99		3				13		310		166.9	
12/31/2024	19	60	9.7		139		0		34		100		3		3		13		310	310	167.5	167.4
12/31/2024	20	60	9.8		139		0		25		100		3				13		310		167.7	
12/31/2024	21	60	9.9		139		1		44		97		3				13		310		167.2	
12/31/2024	22	60	10.0		141		2		54		96		3				13		310		167.5	
12/31/2024	23	60	10.1		140		1		46		98		2		3		13	13	310	310	168.4	167.7

Average:	139				see above	see above	see above	see above
Geometric Mean Average:		0		100				
Limit:	≤ 150 24-HR Block Avg.	≤ 29 24-HR Geometric Mean	OR	≥ 80% 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
OPACITY REPORT

Date 31-Dec-2024

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		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	IC	5	IC	0	0	0	0	0	0	0	0	1
7	0		0		0	0	0	0	0	0	0	0	0
8	0		1		0	0	0	0	0	1	1	0	0
9	1		1		0	1	0	0	0	0	0	0	0
10	0		0		0	0	0	1	0	0	0	1	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
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
OPACITY REPORT

Date 31-Dec-2024

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	IC	5	IC	1	1	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
B - Bad
C - Calibration
M - Maintenance
F - Offline
P - Purge
T - Out of Control
E - Excluded
^ - Startup
* - Shutdown