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

Wheelabrator Technologies

WIN Waste Innovations — Performance for the Planet

Date 5/22/22

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
5/22/2022	0	0	20.8	IBMF	52	IBMF	8	IBMF	4593	IBF	100	IBMF	1	IBMF			0		78		0.0	
5/22/2022	1	0	20.8	IBMF	51	IBMF	8	IBMF	8709	IBF	100	IBMF	0	IBMF			0		78		0.0	
5/22/2022	2	0	21.1	IBMF	52	IBMF	7	IBMF	27168	IBF	100	IBMF	0	IBMF			0		78		0.0	
5/22/2022	3	0	21.1	IBMF	52	IBMF	7	IBMF	107891	IBF	100	IBMF	0	IBMF	0	IBMF	0		78	78	0.0	0.0
5/22/2022	4	0	21.1	IBMF	52	IBMF	7	IBMF	-12201	IBF	0	IBMF	0	IBMF			0		78		0.0	
5/22/2022	5	0	21.2	IMF	51	IMF	7	IMF	197	IBCF	96	IBCMF	0	IMF			0		78		0.0	
5/22/2022	6	0	21.2	IMF	51	IMF	7	IMF	-1288	IBF	0	IBMF	0	IMF			0		77		0.0	
5/22/2022	7	0	21.1	IMF	50	IMF	7	IMF	-1306	IBF	0	IBMF	0	IMF	0	IBMF	0	0	77	77	0.0	0.0
5/22/2022	8	0	21.0	IMF	47	IMF	7	IMF	-1153	IBF	0	IBMF	0	IMF			0		76		0.0	
5/22/2022	9	0	21.0	IMF	46	IMF	7	IMF	-1182	IBF	0	IBMF	0	IMF			0		77		0.0	
5/22/2022	10	0	21.0	IMF	54	IMF	6	IMF	-843	IBF	0	IBMF	0	IMF			0		79		0.0	
5/22/2022	11	0	21.0	IBMF	55	IBMF	5	IBMF	-744	IBF	0	IBMF	0	IBMF	0	IBMF	0		82	79	0.0	0.0
5/22/2022	12	0	21.0	IMF	67	IMF	5	IMF	-728	IBF	0	IBMF	0	IMF			0		84		0.0	
5/22/2022	13	0	21.0	IMF	61	IMF	6	IMF	-726	IBF	0	IBMF	0	IMF			0		84		0.7	
5/22/2022	14	0	21.0	IMF	60	IMF	6	IMF	-743	IBF	0	IBMF	0	IMF			0		86		1.8	
5/22/2022	15	0	21.0	IBMF	52	IBMF	6	IBMF	-890	IBF	0	IBMF	0	IBMF	0	IBMF	0	0	86	85	0.0	0.6
5/22/2022	16	10	18.7	ICMF	330	ICMF	64	ICMF	-951	IBF	0	IBCMF	27	ICMF			0		87		0.0	
5/22/2022	17	7	18.7	IBCF	67	IBCF	45	IBCF	-942	IBF	0	IBCF	892	IBCF			0		88		0.0	
5/22/2022	18	0	21.0	IBF	1	IBF	1	IBF	-958	IBF	0	IBF	0	IBF			0		88		0.0	
5/22/2022	19	0	21.0	IBF	1	IBF	1	IBF	-851	IBF	0	IBF	0	IBF	230	IBCMF	0		88	88	0.1	0.0
5/22/2022	20	0	21.0	IBF	1	IBF	1	IBF	-775	IBF	0	IBF	0	IBF			0		88		0.0	
5/22/2022	21	0	21.0	IBF	1	IBF	1	IBF	-714	IBF	0	IBF	0	IBF			0		86		0.0	
5/22/2022	22	0	21.0	IBF	1	IBF	1	IBF	2488	IBF	100	IBF	0	IBF			0		85		0.0	
5/22/2022	23	0	21.0	IBF	1	IBF	1	IBF	100	IBF	99	IBF	0	IBF	0	IBF	0	0	118	94	0.0	0.0

Average:	52 IBCMF				see above	see above	see above	see above
Geometric Mean Average:		4 IBCMF		0 IBCMF				
Limit:	≤ 205 **24-HR Block Avg.**	≤ 29 **24-HR Geometric Mean**	**OR**	≥ 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

PERFORMANCE FOR THE PLANET

Date 5/22/22

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
5/22/2022	0																					
5/22/2022	1																					
5/22/2022	2																					
5/22/2022	3																					
5/22/2022	4																					
5/22/2022	5																					
5/22/2022	6																					
5/22/2022	7																					
5/22/2022	8																					
5/22/2022	9																					
5/22/2022	10																					
5/22/2022	11																					
5/22/2022	12																					
5/22/2022	13																					
5/22/2022	14																					
5/22/2022	15																					
5/22/2022	16																					
5/22/2022	17																					
5/22/2022	18																					
5/22/2022	19																					
5/22/2022	20																					
5/22/2022	21																					
5/22/2022	22																					
5/22/2022	23																					

Average:	180 ppmc		38 %RE	see above	see above	see above	see above	
Geometric Mean Average:		14 ppmc						
Limit:	≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean	OR ≥ 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	

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WHEELABRATOR NORTH ANDOVER
A WIN-WASTE INNOVATIONS COMPANY
OPACITY REPORT

Date 22-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	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
1	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
2	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
3	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
4	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
5	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
6	2	ICF	23	ICF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	4
7	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
8	2	IF	2	IF	2	IF	2	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	2
9	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3
10	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3
11	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3
12	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3
13	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3
14	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3
15	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3
16	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3		3
17	3		3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3
18	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3
19	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	3	IF	2	IF	3	IF	3
20	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
21	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
22	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2
23	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2	IF	2

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OPACITY REPORT

PERFORMANCE FOR THE PLANET

Date 22-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	0	0	0	0	0	0	0	0	0	0	0
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

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