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

Wheelabrator Technologies

WIN Waste Innovations — Performance for the Planet

Date 6/27/23

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
6/27/2023	0	60	10.5		142		0		52		100		4				12		309		164.6	
6/27/2023	1	60	10.6		141		0		30		100		5				12		310		163.6	
6/27/2023	2	60	10.6		140		0		31		100		4				12		309		165.1	
6/27/2023	3	60	10.2		140		0		37		100		5		5		12		309	309	163.7	164.3
6/27/2023	4	60	10.3		139		0		37		100		4				12		310		165.0	
6/27/2023	5	60	10.3		136		0		34		100		5				12		310		166.5	
6/27/2023	6	60	10.5		140		0		50		100		7				12		309		165.0	
6/27/2023	7	60	10.0		140		0		45		100		5		5		12	12	309	309	166.6	165.8
6/27/2023	8	60	10.0		137		0		34		100		6				12		309		165.6	
6/27/2023	9	60	10.0		140		0		27		100		7				12		310		163.7	
6/27/2023	10	60	9.8		135		0		46		99		17				12		308		166.4	
6/27/2023	11	60	9.5		122		0		19		100		7		9		12		310	309	163.4	164.8
6/27/2023	12	60	9.4		134		0		25		100		5				12		310		165.5	
6/27/2023	13	60	9.7		135		5		58		92		5				12		309		166.2	
6/27/2023	14	60	9.2		117		1		47		97		43				12		308		165.9	
6/27/2023	15	60	9.0		122		0		42		99		26		20		12	12	310	309	161.6	164.8
6/27/2023	16	60	10.4		141		4		54		92		7				12		311		164.7	
6/27/2023	17	60	10.5		138		1		42		97		7				13		309		160.7	
6/27/2023	18	60	10.4		136		3		47		95		7				12		311		162.8	
6/27/2023	19	60	10.6		137		8		58		86		9		8		12		310	310	161.4	162.4
6/27/2023	20	60	10.1		136		1		43		98		6				12		308		160.7	
6/27/2023	21	60	9.7		129		0		48		100		7				12		310		165.3	
6/27/2023	22	60	9.5		131		0		38		100		6				12		309		165.6	
6/27/2023	23	60	10.0		135		0		29		100		5		6		12	12	309	309	162.1	163.4
Average:					135										see above		see above		see above	see above	see above	
Geometric Mean Average:							0															
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

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Date 6/27/23

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
6/27/2023	0	60	10.7		137		4		55		92		2				12		310		165.4	
6/27/2023	1	60	10.8		136		2		37		96		2				12		311		164.0	
6/27/2023	2	60	11.1		132		4		32		88		4				13		310		164.6	
6/27/2023	3	60	10.7		139		1		47		98		0		2		12		310	310	163.4	164.4
6/27/2023	4	60	10.4		101		7		52		87		118	IBCT			12		310		163.9	
6/27/2023	5	60	10.2		117		1		59		98		0	IT			12		310		165.4	
6/27/2023	6	60	10.2		136		15		68		79		248	IBCMT			12		310		165.5	
6/27/2023	7	60	6.7	IBCM	69	IBCM	32	IBCM	49		36	IBCM	588	IBCMT	238	IBCMT	12	12	310	310	166.9	165.4
6/27/2023	8	60	21.2	IBM	2	IBM	0	IBM	51		100	IBM	0	IBMT			12		310		166.0	
6/27/2023	9	60	11.9	IBM	67	IBM	1	IBM	45		99	IBM	2	IBMT			12		310		167.0	
6/27/2023	10	60	8.8	IBCM	69	IBCM	20	IBCM	47		58	IBCM	42	IBCMT			12		310		166.4	
6/27/2023	11	60	8.3	IBCM	56	IBCM	18	IBCM	26		31	IBCM	326	IBCM	93	IBCMT	13		310	310	167.2	166.6
6/27/2023	12	60	8.9	IBCM	110	IBCM	66	IBCM	34		0	IBCM	278	IBCMT			12		310		165.7	
6/27/2023	13	60	21.2	IBM	9	IBM	0	IBM	51		100	IBM	19	IBMT			12		310		165.6	
6/27/2023	14	60	20.9	IBM	1	IBM	0	IBM	48		99	IBM	46	IBMT			12		310		166.8	
6/27/2023	15	60	21.2	IBM	1	IBM	2	IBM	52		97	IBM	54	IBMT	99	IBCMT	12	12	310	310	166.8	166.2
6/27/2023	16	60	21.2	IBM	0	IBM	2	IBM	48		95	IBM	66	IBMT			13		310		165.3	
6/27/2023	17	60	21.1	IBM	0	IBM	4	IBM	59		94	IBM	73	IBMT			13		310		168.4	
6/27/2023	18	60	21.0	IBM	0	IBM	4	IBM	53		92	IBM	78	IBMT			13		310		166.6	
6/27/2023	19	60	21.0	IBM	0	IBM	4	IBM	42		90	IBM	79	IBMT	74	IBMT	12		310	310	166.2	166.6
6/27/2023	20	60	21.0	IBM	0	IBM	4	IBM	67		94	IBM	80	IBMT			13		310		165.4	
6/27/2023	21	60	21.0	IBM	0	IBM	4	IBM	42		91	IBM	77	IBMT			12		310		165.8	
6/27/2023	22	60	20.9	IBM	0	IBM	4	IBM	49		92	IBM	79	IBMT			12		310		167.0	
6/27/2023	23	60	20.9	IBM	0	IBM	4	IBM	39		90	IBM	77	IBMT	79	IBMT	13	13	310	310	167.4	166.4

Average:	128		94	see above	see above	see above	see above
Geometric Mean Average:		3					
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**

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WHEELABRATOR NORTH ANDOVER
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OPACITY REPORT

Date 27-Jun-2023

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	3	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		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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OPACITY REPORT

Date 27-Jun-2023

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	2	IBC	4	IBC	0	0	0	0	0	0	0	0	1
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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