



**2021 Q2
INCINERATION
REPORT**



Stericycle, ULC

95 Deerhurst Drive
Brampton, ON
L6T 5R7

Tel.: (905) 789-6008

Fax: (905) 789-5549

July 27 2021

District Manager
Ministry of the Environment, Conservation and Parks
Halton-Peel District Office
300-4145 North Service Road
Burlington, ON
L7L 6A3

Dear District Manager,

**Re: Stericycle, ULC.
Certificate of Approval for a Waste Disposal Site No. A680324**

As required by Condition 52 of the above-mentioned Certificate of Approval, please find attached the incinerator quarterly report for the first quarter of 2021.

During April 2021 there were 18 occurrences of the 4-hour CO alarm & 2 occurrences of the 12-hour CO alarm. In May 2021 there were 5 occurrences of the 4-hour CO alarm and 0 occurrences of the 12-hour CO alarm. In July 2021 there were 5 occurrences of the 4-hour CO alarm and 1 occurrences of the 12-hour CO alarm. Stericycle will continue to work with the incinerator operators to further reduce the number of CO alarms.

There were 0 occurrences of the 24-hour NOX alarm triggered in Q2 of 2021.

Details on the above noted alarms are available in the body of the attached report.

SECOND QUARTER 2021 INCINERATOR QUARTERLY REPORT - SUPPLEMENTAL INFORMATION

- The Emergency Bypass stack was used once during Q2 2021.
- Throughout the quarter, minor issues with either the waste feed or the proper operation of certain pieces of equipment caused alarm conditions. In all cases, the problems were fixed, and normal operations resumed. Corrective actions included adjustments to the waste feed mix and rate and corrective maintenance on affected systems.
- Throughout the second quarter of 2021, the incinerator was run by trained Stericycle operators Emilio Perez, Ryan Turner, Said M. Said & Julius Claude.
- There were no complaints received regarding the operation of the incinerator during the second quarter of 2021.
- Stericycle Inc. operated the incinerator on the following days during the fourth quarter:

Start-up	Shut Down
03/25/2021 @ 15:35	04/06/2021 @ 07:25
04/06/2021 @ 15:45	04/23/2021 @ 09:51
04/23/2021 @ 13:53	04/26/2021 @ 16:17
04/26/2021 @ 17:31	05/03/2021 @ 19:18
05/07/2021 @ 12:27	05/25/2021 @ 11:20
05/25/2021 @ 12:54	06/10/2021 @ 07:32
06/10/2021 @ 20:11	06/20/2021 @ 23:35
06/28/2021 @ 10:10	

During Q2 of 2021 routine maintenance was performed on the incinerator during the scheduled shutdowns.

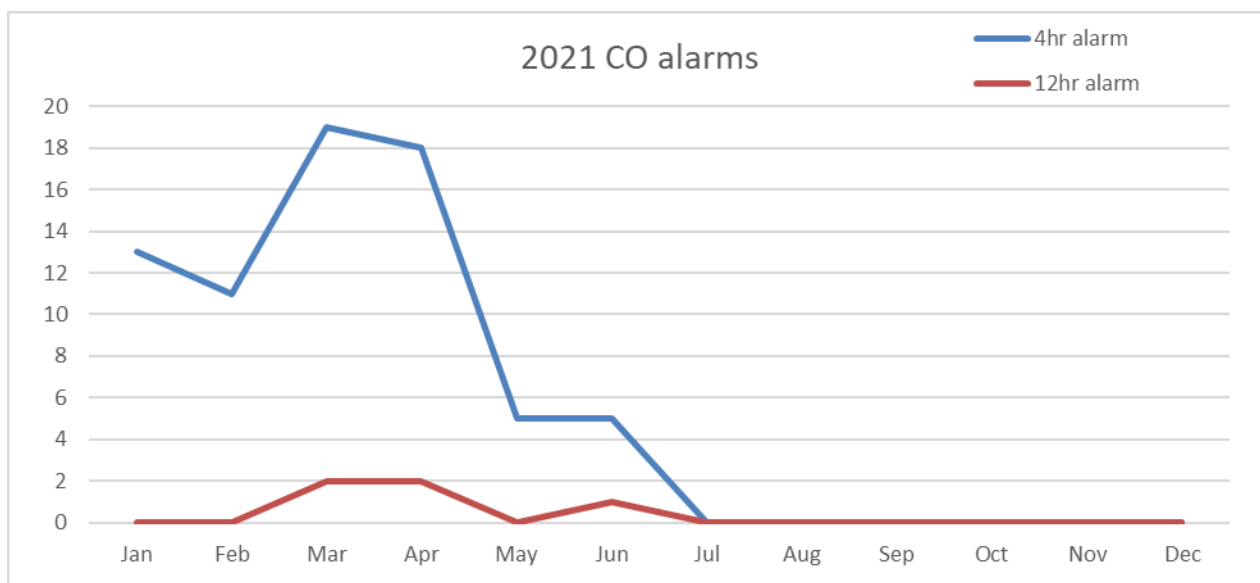
- Replacement of the incinerator feed hopper fire door.
- Replacement of the activated carbon in the carbon bed after the annual source test.
- Replacement of the refractory in the secondary chamber.

Emergency Bypass Summary

Date	Start Time	End Time	Duration	Emission Volume (m ³)	Reason	Corrective Action
5/25/2021	11:17:00	13:01:00	1:44:00	379.17	At approximately 11:18am the incinerator bypass stack opened due to a failure of the quench pump. In our system, there is an interlock that forces the APC bypass cap to open should the quench pump fail.	The pump appears to have failed due to a failed inlet line for flushing water in the seal. The quench pump has a flushed double mechanical seal. When the water that goes through the seal failed to make it through the seal, the internal of the pump overheats causing failure of the pump. That failure causes the Motor to trip out which causes the Bypass. As per usual we had a spare pump/motor assembled on the shelf and the pump was swapped out by the maintenance team. The stack was closed at 1:00pm. On further investigation, it was found that a piece of refractory had made its way into the impellor of the pump. This cause more strain on the pump and increased vibration which contributed to the failure.

CO Alarm Chart Q1 2021

Month	4 Hour CO average alarms	12 Hour CO average alarms
January	13	0
February	11	0
March	19	2
April	18	2
May	5	0
June	5	1
July		
August		
September		
October		
November		
December		



Stericycle warrants that it has exercised best efforts to adhere to all the applicable Terms & Conditions of its Waste Disposal Site Certificate of Approval including all inspection and reporting requirements through Q1 of 2021.

Stericycle is very committed to the full compliance with all conditions of its Provisional Certificate of Approval, throughout the year, whenever a situation of possible non-compliance was identified; immediate actions were taken to ensure full compliance. Stericycle has

mechanisms in place to ensure full compliance at all times. Employees are aware of their responsibilities and are trained appropriately.

Stericycle believes that the current monitoring program is sufficient and enables both Stericycle and the MECP to have a good understanding of the Site operations and to assess its compliance with the Certificate of Approval and all the relevant regulations.

However, Stericycle is very committed to looking for ways to improve its operations through better procedures, training, inspections and monitoring programs and will continue to do so.

I trust that this is the information required and that it meets with your approval. Should you have any questions or require additional information, please do not hesitate to contact me accordingly.

Regards,

A handwritten signature in black ink, appearing to be 'DK' with a large, sweeping flourish underneath.

Dan Kokol
ESH Specialist
Phone: 905-595-8532
Email: dkokol@stericycle.com



May 26th, 2021

Christelle Broux Senior Environmental Officer
Ministry of Environment, Conservation and Parks
Halton-Peel District Office
4145 North Service Road, Suite 300
Burlington, Ontario
L7L 6A3

Dear Christelle Broux,

RE: Stericycle Site Certificate of Approval No. A680324
Use of the Emergency Bypass Stack
Ref #:

On May 25th, 2021 at approximately 11:17 the emergency bypass stack was opened due to a failure of the quench tank pump.

As required by conditions 36 and 38(1) (b) & (2) of the above referenced ECA, the incinerator was brought into a controlled shutdown during this time. The emergency bypass stack was open for a duration of one (1) hour and forty-four (44) minutes. During this period no waste was injected into the incinerator and the upper chamber was maintained at 1000°C by natural gas only.

On May 25th, 2021 at approximately 11:23 a call was placed to the Spills Action Control center by Stericycle Facility Manager William Legere to report the use of the emergency bypass stack. At approximately 11:17 the incinerator bypass stack opened due to a failure of the quench pump. Maintenance accessed the pump & determined that the pump failed due to a failed inlet line for flushing water in the seal. Maintenance retrieved the spare pump/motor assembly and the pump was swapped out by the maintenance team. The stack was closed at 13:01.

During the bypass approximately 379.17m³ of flue gases exited the emergency bypass stack.

A follow-up call was placed to the Spills Action Center by Stericycle Facility Manager William Legere at 13:22.

If you require any additional information, please do not hesitate to call me directly at (905) 595-8532.

Yours truly,

Dan Kokol

Operational EHS Specialist
Stericycle ULC
905-595-8532
dkokol@stericycle.com



April 2021 Incinerator Averages, Temperatures Ranges

	TheDate	OX6min	COmin	NOXmin	Prime Temp °C	Sec Temp °C	SNCR	Dem Temp °C	Carb Temp °C	DiffTemp°C	ID Fan Temp °C	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Operating Mode
1-Apr	Average	13.1	5.2	63.7	916.7	1058.7	6.0	35.5	51.3	15.8	40.0	7.0	6.9	7.3	42.5	40.9	0.0	Normal(ON)
	Min	6.3	0.0	-0.1	684.7	1039.8	5.9	27.4	50.5	11.2	35.6	7.0	6.7	7.1	42.0	40.5	0.0	
	Max	15.3	812.1	176.3	1105.8	1090.8	6.0	41.8	53.3	23.2	45.6	7.1	7.1	7.5	42.9	41.4	0.0	
2-Apr	Average	13.1	4.8	73.7	1019.0	1062.1	6.0	38.7	51.2	12.6	39.6	7.0	6.7	7.3	42.3	40.7	0.0	Normal(ON)
	Min	11.9	0.5	26.0	930.2	985.6	5.9	35.1	50.9	10.2	37.0	7.0	6.6	7.1	42.0	40.5	0.0	
	Max	15.4	667.4	184.4	1066.4	1103.8	6.0	41.3	51.7	16.0	41.2	7.0	7.0	7.8	42.5	40.9	0.0	
3-Apr	Average	13.3	4.0	67.8	1000.0	1060.0	6.0	38.6	49.8	11.2	39.3	7.0	6.7	7.4	42.3	40.7	0.0	Normal(ON)
	Min	11.5	0.0	22.8	965.7	963.9	6.0	36.4	40.4	3.3	36.5	7.0	6.6	7.1	42.0	40.5	0.0	
	Max	15.9	297.1	177.0	1059.8	1140.7	6.0	40.7	52.0	13.8	40.9	7.1	6.9	8.1	42.6	40.9	0.0	
4-Apr	Average	13.3	5.5	45.4	1034.3	1056.2	6.0	38.7	51.5	12.8	41.6	7.0	6.6	7.5	41.6	40.6	0.2	Normal(ON)
	Min	11.5	0.0	20.8	903.6	994.6	6.0	34.6	50.1	9.0	38.7	6.9	6.4	7.2	40.5	40.4	0.0	
	Max	15.7	880.7	116.7	1113.8	1084.4	6.0	45.1	54.1	15.5	47.5	7.1	7.7	8.0	42.2	40.9	1.0	
5-Apr	Average	13.8	4.9	41.7	991.1	1052.6	6.0	39.4	51.4	11.9	42.5	6.9	7.4	7.4	40.8	40.8	0.6	Normal(ON)
	Min	7.6	0.0	0.1	710.9	975.1	6.0	32.3	49.7	8.1	37.7	6.1	6.3	7.0	40.4	40.4	0.0	
	Max	16.3	806.1	357.0	1105.0	1098.3	6.0	44.6	53.6	17.4	46.2	7.2	8.0	7.9	41.2	41.2	1.0	
6-Apr	Average	13.5	4.0	39.4	952.2	1057.7	5.9	33.6	48.4	14.9	37.0	7.1	7.0	7.3	40.0	39.8	0.3	Normal(ON)/Shut- down/Off/Start- up/Normal(ON)
	Min	11.4	0.0	-16.5	773.9	1011.7	4.7	23.6	20.8	-33.2	16.9	6.2	6.3	7.0	0.1	0.0	0.0	
	Max	20.0	359.2	106.7	1071.0	1086.1	6.0	54.3	50.9	20.5	41.8	8.7	9.7	8.1	42.7	42.1	1.0	
7-Apr	Average	13.0	3.5	86.4	950.8	1075.6	6.0	33.1	49.4	16.3	41.1	7.1	7.1	7.2	42.3	41.1	0.6	Normal(ON)
	Min	11.2	0.0	12.6	907.8	1038.3	6.0	28.8	46.2	14.5	38.7	6.5	6.8	7.1	42.0	40.7	0.0	
	Max	14.8	428.2	277.6	1012.1	1168.1	6.0	35.7	50.7	19.3	43.1	7.4	7.5	7.4	42.7	41.5	1.0	
8-Apr	Average	13.1	3.9	71.1	965.6	1062.6	6.0	33.2	49.8	16.6	38.7	7.3	7.2	7.3	42.5	41.2	0.6	Normal(ON)
	Min	11.7	0.0	16.1	933.0	1005.4	6.0	30.1	48.1	14.9	37.1	6.4	6.8	7.1	41.6	40.5	0.0	
	Max	14.5	151.2	207.9	994.5	1121.0	6.2	35.9	50.9	18.0	40.7	7.6	7.6	7.5	43.2	41.8	1.0	
9-Apr	Average	12.9	1.1	74.5	929.0	1059.0	6.1	33.7	50.2	16.5	39.8	7.5	7.0	7.3	42.0	40.8	0.0	Normal(ON)
	Min	10.8	0.0	0.5	886.5	986.9	6.0	30.8	48.5	14.2	38.4	7.4	6.9	7.1	41.7	40.6	0.0	
	Max	15.3	23.2	299.0	988.3	1079.5	6.4	36.5	50.9	17.7	41.7	7.6	7.2	7.5	42.3	41.1	1.0	
10-Apr	Average	12.9	1.4	78.0	939.7	1059.9	6.1	34.8	50.4	15.6	41.3	7.4	6.9	7.3	41.8	40.6	0.2	Normal(ON)
	Min	10.3	0.0	0.6	893.4	995.1	6.0	27.3	47.6	11.8	37.2	7.2	6.8	7.0	41.3	40.4	0.0	
	Max	14.7	73.0	299.0	1003.6	1080.1	6.4	39.2	51.3	20.3	45.0	7.6	7.2	7.5	42.3	41.1	1.0	
11-Apr	Average	12.8	6.0	58.8	839.1	1057.9	6.0	29.4	48.6	19.1	37.8	7.3	7.0	7.4	41.2	40.5	0.0	Normal(ON)
	Min	9.8	0.0	7.4	684.4	1040.7	6.0	25.9	46.7	17.8	36.1	7.2	6.9	7.0	40.1	40.4	0.0	
	Max	14.9	874.9	200.1	933.3	1070.7	6.2	32.5	50.5	22.1	39.6	7.5	7.2	7.7	41.6	40.7	0.0	
12-Apr	Average	13.0	2.4	78.9	733.5	1053.2	6.0	34.8	49.6	14.8	40.9	7.5	7.2	7.4	40.0	40.3	0.4	Normal(ON)
	Min	10.0	0.0	7.1	450.6	997.9	6.0	26.9	46.7	9.6	36.6	7.2	6.9	7.0	39.3	39.7	0.0	
	Max	15.6	585.5	246.7	948.5	1092.7	6.0	41.6	51.3	19.8	45.9	7.7	7.5	7.6	40.5	40.7	1.0	
13-Apr	Average	13.5	0.7	65.2	869.8	1046.1	6.0	33.9	48.9	15.0	39.3	7.4	7.2	7.3	39.8	40.1	0.3	Normal(ON)
	Min	11.4	0.0	14.8	670.5	952.8	6.0	25.5	42.6	8.1	34.6	7.2	7.0	7.1	39.3	39.8	0.0	
	Max	15.9	82.4	174.6	1031.3	1081.5	6.0	43.1	51.3	18.4	44.5	7.8	7.6	7.6	40.0	40.4	1.0	
14-Apr	Average	13.0	2.6	63.6	1006.1	1058.6	6.0	34.8	49.9	15.1	41.5	7.3	7.3	7.4	40.0	40.4	0.5	Normal(ON)
	Min	11.2	0.0	19.7	946.1	1006.3	6.0	29.7	48.1	10.8	39.4	7.1	6.8	7.0	39.6	40.0	0.0	
	Max	14.7	764.7	199.0	1029.7	1081.8	6.0	39.7	50.9	18.4	43.7	7.7	7.8	8.7	40.7	41.0	1.0	
15-Apr	Average	13.4	1.8	79.7	926.4	1051.2	6.0	33.5	49.0	15.5	40.6	8.0	7.9	7.5	40.7	40.5	0.7	Normal(ON)
	Min	10.4	0.0	8.7	680.5	954.9	6.0	28.0	45.7	12.4	37.6	7.4	7.1	7.2	40.4	40.1	0.0	
	Max	15.6	109.3	255.5	1049.5	1084.9	6.0	37.5	50.9	18.1	42.5	9.6	8.8	7.9	40.9	40.9	1.0	
16-Apr	Average	12.8	3.4	76.5	1031.2	1058.5	6.0	35.9	49.9	13.9	41.4	8.5	8.0	7.2	40.9	40.7	1.0	Normal(ON)
	Min	9.0	0.0	-9.9	729.6	976.7	6.0	31.2	46.6	10.3	38.3	8.2	7.8	7.1	40.4	40.2	0.0	
	Max	18.0	209.8	364.6	1085.5	1079.6	6.0	40.3	50.9	17.8	44.5	9.5	8.2	7.7	41.2	41.1	1.0	
17-Apr	Average	13.0	4.0	47.3	1072.4	1061.4	6.0	35.1	52.8	17.7	42.4	7.6	7.1	7.3	40.6	40.6	1.0	Normal(ON)
	Min	10.6	0.0	1.1	968.6	1033.2	6.0	31.0	44.2	8.8	39.4	6.9	6.9	7.1	40.2	40.3	0.0	
	Max	14.4	636.1	110.6	1120.8	1121.0	6.0	40.1	59.0	25.5	45.2	9.4	8.0	7.5	40.9	40.8	1.0	
18-Apr	Average	13.0	3.2	60.5	1002.2	1059.8	6.0	34.8	55.7	20.9	44.7	8.1	7.4	7.4	40.4	40.5	0.8	Normal(ON)
	Min	10.4	0.0	0.5	885.2	1035.0	6.0	29.5	52.2	16.8	41.8	7.0	6.9	7.1	40.2	39.9	0.0	
	Max	14.3	966.2	134.1	1097.9	1080.6	6.0	41.2	59.4	25.3	47.5	10.2	7.8	7.8	40.6	40.7	1.0	
19-Apr	Average	12.9	2.8	55.3	1017.5	1058.9	6.0	33.9	56.1	22.2	45.1	7.7	7.3	7.3	40.7	40.7	1.0	Normal(ON)
	Min	7.9	0.0	-0.7	959.8	1025.1	6.0	30.0	55.1	19.0	42.4	6.2	6.9	7.1	40.2	40.4	1.0	
	Max	13.9	324.1	195.7	1091.3	1091.3	6.0	38.6	57.7	25.7	47.9	10.1	7.6	7.6	41.1	41.1	1.0	

April 2021 Incinerator Averages, Temperatures Ranges

TheDate		OX6min	COmin	NOXmin	Prime Temp °C	Sec Temp °C	SNCR	Dem Temp °C	Carb Temp °C	DiffTemp°C	ID Fan Temp °C	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Operating Mode
20-Apr	Average	13.5	3.9	49.8	885.0	1041.5	6.0	32.8	55.5	22.6	43.1	7.7	7.3	7.3	40.7	40.8	0.9	Normal(ON)
	Min	8.8	0.0	-0.5	677.7	960.4	6.0	26.6	54.7	18.2	39.4	7.4	7.0	7.1	40.4	40.5	0.0	
	Max	16.0	941.9	126.8	1060.9	1080.2	6.0	39.1	57.3	28.3	47.1	8.0	7.4	7.6	41.0	41.1	1.0	
21-Apr	Average	13.0	3.6	70.9	945.1	1059.1	6.0	36.7	54.9	18.2	45.6	7.2	7.1	7.4	40.5	40.6	1.0	Normal(ON)
	Min	10.2	0.0	16.4	871.0	993.2	6.0	28.4	51.9	10.9	41.4	5.8	6.8	7.0	39.9	40.3	0.0	
	Max	15.3	638.1	146.1	1040.3	1094.7	6.0	43.2	58.2	24.8	49.4	7.9	7.7	7.6	40.7	40.8	1.0	
22-Apr	Average	13.1	3.0	69.9	961.1	1066.2	6.0	35.4	53.5	18.1	43.0	7.4	7.2	7.3	40.3	40.5	1.0	Normal(ON)
	Min	8.2	0.0	-0.4	902.8	1017.7	6.0	28.4	48.1	14.0	38.6	5.5	6.9	7.1	39.9	40.3	0.0	
	Max	14.7	536.1	145.5	1064.8	1111.0	6.0	40.8	54.8	24.8	45.1	8.3	7.9	7.5	40.7	40.6	1.0	
23-Apr	Average	14.0	2.4	37.7	968.2	1040.6	5.9	31.9	51.6	19.6	39.2	8.4	7.7	7.5	30.8	37.7	0.9	Normal(ON)/Shut-Down/Off/Start-up/Noraml(ON)
	Min	9.2	0.0	-22.0	718.3	919.1	5.3	25.0	40.5	10.3	32.2	7.6	7.0	7.0	0.1	8.4	0.0	
	Max	20.0	97.9	125.4	1061.8	1082.0	6.0	37.8	59.2	27.0	45.7	10.9	9.7	7.8	41.4	41.5	1.0	
24-Apr	Average	13.2	1.2	55.0	1017.2	1066.6	6.0	35.6	53.6	18.1	43.7	7.8	7.3	7.2	40.1	40.5	1.0	Normal(ON)
	Min	11.1	0.0	15.9	982.8	1033.2	6.0	26.4	47.0	10.8	39.9	7.3	7.1	7.0	39.4	40.2	0.0	
	Max	14.2	70.2	108.2	1070.3	1133.6	6.0	42.7	59.3	27.5	47.8	8.3	7.4	7.5	40.5	40.7	2.0	
25-Apr	Average	13.4	6.9	47.7	1019.8	1049.9	6.0	29.1	51.4	22.4	40.4	7.4	7.2	7.3	39.9	40.3	0.8	Normal(ON)
	Min	10.5	0.0	0.2	750.3	994.0	6.0	23.7	47.6	14.0	37.8	7.0	6.9	7.1	39.3	39.8	0.0	
	Max	16.2	814.0	96.7	1156.8	1126.8	6.0	36.0	55.7	28.8	43.2	8.0	7.3	7.5	40.5	40.5	1.0	
26-Apr	Average	14.2	3.3	50.6	795.0	1018.1	6.0	30.7	47.9	17.2	38.3	7.6	7.1	7.3	40.3	40.2	1.0	Normal(ON)/Shut-down/Start-Up/Normal(On)
	Min	10.4	0.0	7.1	470.9	897.0	6.0	27.0	46.6	13.7	36.9	5.8	6.8	7.2	39.9	39.8	1.0	
	Max	17.2	993.4	150.2	1084.8	1071.9	6.0	35.4	49.2	20.1	41.0	8.4	7.4	7.5	40.8	40.8	1.0	
27-Apr	Average	13.2	1.5	57.1	935.8	1048.9	6.0	32.7	49.3	16.6	40.4	7.2	6.9	7.3	40.6	40.6	1.0	Normal(ON)
	Min	10.8	0.0	-0.1	681.4	956.3	6.0	29.2	48.1	13.0	38.2	5.3	6.8	7.1	40.2	39.8	1.0	
	Max	16.3	666.0	163.5	1022.1	1081.6	6.0	37.4	50.5	19.6	42.8	8.4	7.3	7.5	41.0	41.3	1.0	
28-Apr	Average	13.0	2.9	44.9	1069.8	1057.7	6.1	33.1	49.5	16.4	39.2	7.5	7.0	7.4	41.3	41.3	1.0	Normal(ON)
	Min	11.5	0.0	11.9	979.9	991.9	6.0	30.7	48.5	14.3	37.6	6.2	6.8	7.1	40.9	40.8	1.0	
	Max	15.1	999.7	133.2	1128.2	1076.1	6.4	34.8	51.3	18.5	40.3	8.2	7.2	7.7	41.7	41.7	1.0	
29-Apr	Average	13.0	1.2	60.0	1060.7	1065.5	6.0	34.9	49.6	14.8	40.0	7.1	7.2	7.3	41.2	41.0	1.3	Normal(ON)
	Min	8.7	0.0	0.8	940.1	1010.3	6.0	30.2	46.6	10.0	37.2	4.9	6.7	7.0	40.9	40.6	1.0	
	Max	15.1	495.0	308.8	1136.2	1090.0	6.1	38.9	51.7	19.2	43.4	8.1	7.4	7.5	41.5	41.4	2.0	
30-Apr	Average	13.2	4.2	64.5	1081.3	1066.3	6.0	34.7	48.9	14.2	41.3	7.3	7.1	7.3	41.2	41.3	1.0	Normal(ON)
	Min	12.0	0.0	10.7	1031.3	1015.6	6.0	30.8	47.5	12.5	39.1	7.1	6.9	7.1	40.9	40.9	1.0	
	Max	15.1	973.2	131.6	1121.2	1086.8	6.0	37.7	50.4	17.7	43.5	7.4	7.5	7.6	41.4	41.6	1.0	



April 2021 Incinerator Feed Log

TheDate	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DailySum	Montly Total
4/1/2021	442.9	504.2	302.2	0	232.4	5.6	0	0	0	0	0	42.4	501.9	365	600.7	509.6	601.7	515	608.6	511.6	120.8	501.2	510.3	0	6876.1	238596
4/2/2021	505.8	0	508.4	509.2	501.3	515.8	0	0	0	511	504.7	486.9	495.7	497.1	497.2	497.7	506.4	511.2	293	515.9	499.9	504.6	501.7	635.2	9998.7	
4/3/2021	620	513.5	506.3	504.2	505.2	500.6	514.4	496.1	494.5	511.8	495.3	485.9	499.3	306.4	498.6	494.6	0	0	0	176.3	507.7	502.5	355.6	330.9	9819.7	
4/4/2021	0	556.7	55	545	341.8	510.2	19.5	200	512.4	564.8	505.6	529	0	0	0	0	288.3	0	0	143.2	504.9	52.2	492.5	351.7	6172.8	
4/5/2021	94.6	507.8	406.4	27.7	0	35.6	233.2	0	0	0	0	300	0	393.5	408.5	369.8	140.8	496.4	0	496.2	0	0	502.1	169.1	4581.7	
4/6/2021	0	0	345.7	511.7	405.4	474.4	405.3	0	0	0	0	0	0	0	0	0	70.2	540.4	287.9	510.2	418	514.7	424.5	437.7	5346.1	
4/7/2021	375.5	614.7	515.8	505.9	386.4	509.4	365	460.2	499.7	503.5	189.6	499.6	500.6	312	23.6	0	501.7	497.6	255.7	371.3	560.3	506.2	236.4	388.1	9578.8	
4/8/2021	500.2	501.2	0	507.4	504.3	505.9	313	0	0	321.6	639.5	141.6	554.3	412.8	121.2	335.6	407.4	308.6	0	217.3	507.1	509.6	151.8	507	7967.4	
4/9/2021	461.1	0	400.4	221.8	503.1	493.1	0	304.8	506	665.5	461.6	221.6	230.6	0	184.8	345.2	487	214.4	191.6	512.2	428.9	498.3	508.4	301.6	8142	
4/10/2021	502.4	0	522.4	0	507.3	500.9	0	498.7	495.6	496.7	501.7	498.4	501.9	97.2	506.6	508.4	12.2	499.3	347.7	0	0	0	0	0	6997.4	
4/11/2021	0	0	291	0	0	0	0	449	486.5	503.8	495.7	492.5	493.5	503.8	504.4	503.7	451	456.2	0	0	0	0	0	0	5631.1	
4/12/2021	0	0	0	0	0	0	440.9	497.2	504.5	489.4	486.6	496.7	501.9	497.9	565	453.8	492.5	411.8	0	293.1	0	0	290.8	389.8	6811.9	
4/13/2021	491.4	591.8	406.5	16	0	0	0	0	0	0	96	0	0	0	233	439	330.1	269.3	182.2	411.8	453.7	89.3	412.1	334.5	4756.7	
4/14/2021	512.6	319.3	264.5	371.2	201.1	494.4	163.4	63.6	0	458	386.2	179.1	224.8	374.5	520.3	255.9	127.2	500.5	506.2	268	506.1	368.7	506.8	292.9	7865.3	
4/15/2021	476.5	497.8	551.5	238.6	540.1	0	508.5	496.4	498.1	501.7	502.4	499.6	451.3	382.5	495	497.7	322.6	270	212.4	502.5	496.4	497.2	0	561.2	10000	
4/16/2021	521.9	622.2	346	593.4	0	632.6	327.1	510.1	0	0	0	0	0	0	0	0	0	0	232.4	386.4	624.4	574.6	561.6	0	5932.7	
4/17/2021	600.9	481.6	539.3	628.8	649.1	625.7	282.6	203	0	231.2	166.8	612.3	370.2	0	403.6	415.6	199.2	442.5	165	502.1	311.5	405	509.2	562.5	9307.7	
4/18/2021	426.6	519.9	372.6	320.2	563.8	538	277.7	309.4	480.2	485.8	503.2	496.2	493.8	499.1	490.8	498.2	490.6	502.1	152.4	505.8	509.3	501.2	50.9	0	9987.8	
4/19/2021	518.2	439.8	391.2	380.2	303.8	361.9	157	353	487.6	415.9	453.8	308	589.7	505.2	398.5	502.2	503.2	66.3	517.6	508.8	452.6	118.5	492.4	29.6	9255	
4/20/2021	524	540.5	472.2	532.1	213.3	266.6	0	0	0	0	0	0	19.4	0	0	0	0	0	389	656	520.6	514.5	560.1	548.4	5756.7	
4/21/2021	504.3	519.7	507.6	523.2	541	538	533.8	0	469.6	314	497.7	513.2	500.6	501.8	504.7	519.2	0	0	494.4	517.1	0	0	394.4	574.5	9468.8	
4/22/2021	516.6	502.7	641.4	525.1	497.6	533.5	465	613.7	518.3	502.9	509.7	382.7	398.8	508.4	383.2	538.5	508.6	441.5	504.9	245.1	177.4	48	0	0	9963.6	
4/23/2021	517.1	542.1	550.6	481.5	512.3	304.4	542	101.6	576.4	318.2	0	0	0	0	0	0	0	283.6	550.4	529.2	378.6	505.8	519.2	532.9	7745.9	
4/24/2021	539.2	514.2	514.8	534.2	526.7	537.4	138	503.6	498.3	500.8	507.3	507.2	500	499	498	473.4	492.6	486.3	80.3	536.2	515.7	96.4	0	0	9999.6	
4/25/2021	577.4	502.8	511.6	511.3	519.2	519.3	395.6	307.5	486.3	509.7	494.6	482.4	465.2	0	0	0	0	0	0	0	0	0	0	0	6282.9	
4/26/2021	0	0	0	0	0	518.8	506.4	501.8	575.4	454.7	314.3	502.6	497.8	0	502	0	0	0	0	0	0	0	0	0	4373.8	
4/27/2021	502.8	506	516.2	527.1	513.2	507.5	502.7	504.7	530.1	516.1	510.5	419.3	500.9	503.3	501.7	539	256.9	581.1	0	504.4	490.4	52	0	0	9985.9	
4/28/2021	552.7	550	512.8	531.9	559.8	524.4	356.2	524.3	530.3	282.2	500.6	86.9	509.6	502	507.9	502.2	502.5	506.1	502.6	511.5	0	400.2	33.3	0	9990	
4/29/2021	543.4	557.3	323.5	546.3	540.8	532.5	267.7	500.3	500.8	510.3	500.8	502.6	503	504.6	502	501.4	496	498.5	202.1	442.4	402.9	120.8	0	0	10000	
4/30/2021	590.2	526	510	505.4	500.9	507.6	510.6	500.8	500.8	506.2	501	502.8	497.8	501.8	510.3	498.3	498.1	463	99.6	45	503.2	146.5	74.1	0	10000	

[illegible]

April 2021 CEM Calibration Log



Stericycle®

O2 6 minute average < 7.5

O2 < 7.5

	Start	Stop		Op.	Stack		Actions
Date	Time	Time	Duration	Mode	O2 %	Explanation	Taken
4/1/2021	4:03	4:04	0:01	Normal	6.3	Minor CO fluctuations caused a momentary drop in the O2 levels.	No waste was fed until O2 levels returned to the normal operating range.

Carbon Monoxide > 8ppm 12 hour alarm



Carbon Monoxide > 8ppm 12 hour alarm

	Start	Stop		Op.	Stack CO	Stack CO		Actions
Date	Time	Time	Duration	Mode	@ 11% O ₂	as mg/m ³	Explanation	Taken
4/11/2021	19:00	4:00	9:00	Normal	10.5	12.1	Series of CO spikes between 12:00 & 19:00 caused the 12 hour average to exceed 8ppm on a 12 hour average. The CO spikes were caused by an incorrect flame port air fan setting.	No waste was fed during this period. The flame port air fan was reset to the proper operating range.
4/25/2021	17:00	1:00	8:00	Normal	9.9	11.4	Series of CO spikes between 12:00 & 17:00 caused the 12 hour average to exceed 8ppm on a 12 hour average. The CO spikes were caused by an inconsistent feed rate	No waste was fed during this period.

Carbon Monoxide > 8ppm 4 hour alarm



Carbon Monoxide > 8ppm 4 hour alarm

	Start	Stop		Op.	Stack CO	Stack CO		Actions
Date	Time	Time	Duration	Mode	@ 11% O2	as mg/m ³	Explanation	Taken
4/1/2021	3:00	7:00	4:00	normal	10.4	12.0	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
4/1/2021	20:30	1:00	4:30	normal	10.8	12.5	3 larger CO spikes caused by the incinerator sitting idle between shifts/after 10000kg was achieved	Operator monitored the machine and slowed feeding as needed.
4/3/2021	11:00	14:00	3:00	normal	9.7	11.2	Operator error, Operator input the incorrect value for the flame port minimum	Maintenance and operations supervisors worked to coach the Team member on appropriate setpoints
4/4/2021	11:00	15:00	4:00	normal	12	13.8	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.
4/5/2021	0:00	6:00	6:00	normal	10.5	12.1	3 larger CO spikes caused by the incinerator sitting idle between shifts/after 10000kg was achieved	Operator monitored the machine and slowed feeding as needed.
4/5/2021	17:00	21:00	4:00	normal	8.6	9.9	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.
4/7/2021	17:00	18:00	1:00	normal	8.4	9.7	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.
4/11/2021	16:00	23:00	7:00	normal	15.6	18.0	Series of CO spikes between 12:00 & 19:00 caused the 12 hour average to exceed 8ppm on a 12 hour average. The CO spikes were caused by an incorrect flame port air fan setting.	No waste was fed during this period. The flame port air fan was reset to the proper operating range.

Carbon Monoxide > 8ppm 4 hour alarm

4/12/2021	14:00	15:00	1:00	normal	8	9.2	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.
4/18/2021	8:00	11:00	3:00	normal	8.7	10.0	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.
4/20/2021	7:00	11:00	4:00	normal	12	13.8	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.
4/21/2021	14:00	18:00	4:00	normal	10.4	12.0	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.
4/25/2021	2:00	5:00	3:00	normal	8.3	9.6	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.
4/25/2021	12:00	15:00	3:00	normal	12	13.8	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.
4/25/2021	17:00	23:00	6:00	normal	12	13.8	Series of CO spikes between 12:00 & 17:00 caused the 12 hour average to exceed 8ppm on a 12 hour average. The CO spikes were caused by an inconsistent feed rate	No waste was fed during this period.
4/26/2021	15:00	19:00	4:00	normal/shut-down	10.7	12.3	CO Spike caused by Feed ram sticking.	No waste was fed during this period.
4/28/2021	20:00	0:00	4:00	normal	13.6	15.7	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.
4/30/2021	20:00	0:00	4:00	normal	11.2	12.9	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.

Secondary Chamber Temperature < 1000°C

Date	Start Time	Stop Time	Duration	Op. Mode	Temp. °C	Explanation	Actions Taken
4/3/2021	18:27	19:27	1:00	Normal	980	Machine sat idle during shift change	Operator changed the FPA and brought the temperature back up
4/5/2021	8:09	8:40	0:31	Normal	992	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up
4/5/2021	21:43	22:14	0:31	Normal	986	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up
4/13/2021	6:04	8:25	2:21	Normal	975	Machine sat idle during shift change	Operator changed the FPA and brought the temperature back up
4/20/2021	10:34	11:06	0:32	Normal	974	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up
4/26/2021	0:43	5:28	4:45	Normal	967	Machine sat while maintenance was repairing the machine	Operator changed the FPA and brought the temperature back up No waste was fed
4/26/2021	16:41	17:42	1:01	Shut-Down	956	Machine sat while maintenance was repairing the machine	No action taken at the time, incinerator completed the shut-down cycle.
4/27/2021	17:57	19:05	1:08	Normal	975	Machine sat while maintenance was working on SNCR	Operator changed the FPA and brought the temperature back up

Differential from Demister < 10 C



Differential from Demister < 10°C

	Start	Stop		Op.	Differential Temp		Actions
Date	Time	Time	Duration	Mode	Outlet °C	Explanation	Taken
4/3/2021	15:54	19:44	3:50	Normal	6	Boiler fire eye failure	Maintenance dispatched the contractor to replace the part
4/4/2021	22:32	1:36	3:04	Normal	9	Reheat valve failure	Carbon reheat valve was repaired.



May 2021 Incineration Averages, Temperatures Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp	IDFanTemp°C	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Operating Mode
5/1/2021	Average	13.5	3.5	45.9	976.0	1057.6	6.0	31.4	48.3	16.9	38.9	7.4	7.3	7.3	41.2	41.1	1.1	Normal(ON)
	Min	10.9	0.0	0.9	743.9	1008.9	6.0	26.9	47.5	13.3	36.8	7.3	7.1	7.1	40.8	40.6	1.0	
	Max	15.7	1083.3	109.0	1120.4	1079.3	6.0	35.2	49.2	21.4	40.7	7.8	7.6	7.5	41.6	41.4	2.0	
5/2/2021	Average	13.4	1.7	56.1	1012.7	1063.9	6.0	33.7	49.4	15.8	35.1	7.4	7.4	7.2	41.0	40.7	1.0	Normal(ON)
	Min	10.5	0.0	1.5	924.4	1006.5	6.0	28.6	48.3	12.0	31.9	7.3	7.3	7.0	40.7	40.5	1.0	
	Max	15.8	768.7	129.3	1104.2	1104.7	6.1	38.4	50.5	20.0	38.4	7.6	7.7	7.4	41.2	40.9	2.0	
5/3/2021	Average	13.5	1.5	44.5	1030.0	1037.9	6.0	34.3	49.3	15.1	37.4	7.4	7.4	7.4	41.2	40.6	1.0	Normal(ON)/Shut-Down/Off
	Min	10.9	0.0	0.0	833.3	579.3	6.0	29.7	44.8	11.5	33.4	7.3	7.1	7.2	32.4	31.9	1.0	
	Max	20.4	673.4	103.1	1082.0	1078.4	6.1	37.0	50.2	18.5	38.8	7.8	8.0	7.9	41.7	41.2	1.0	
5/4/2021	Average	20.1	0.5	1.5	384.1	223.0	6.7	31.7	28.5	-3.2	19.5	5.5	9.6	8.1	1.7	1.6	0.0	Off
	Min	11.5	0.0	0.0	157.5	84.9	6.1	18.9	19.4	-21.3	16.0	1.4	8.0	7.9	0.0	0.0	0.0	
	Max	20.4	673.4	103.1	1082.0	1078.4	6.8	52.7	50.2	18.5	38.8	8.1	9.8	8.2	41.7	41.2	1.0	
5/5/2021	Average	19.8	0.0	5.3	87.1	54.6	6.8	30.2	25.9	-4.3	17.2	8.1	9.8	8.3	0.1	0.0	0.0	Off
	Min	11.5	0.0	0.0	48.5	37.8	6.7	18.4	17.6	-8.6	14.9	7.6	9.8	8.2	0.0	0.0	0.0	
	Max	20.4	0.0	95.0	157.3	85.4	6.8	37.9	31.0	1.3	20.5	8.4	9.9	8.4	0.1	0.0	0.0	
5/6/2021	Average	19.8	0.0	4.8	36.0	31.4	6.5	17.6	16.6	-1.0	15.0	8.4	9.9	8.0	0.0	0.0	0.0	Off
	Min	11.5	0.0	0.0	30.1	28.9	6.4	15.4	15.3	-8.4	12.0	8.4	9.9	5.1	0.0	0.0	0.0	
	Max	20.4	0.0	95.0	48.5	37.8	6.7	28.1	19.9	0.3	16.8	8.5	9.9	8.5	0.1	0.0	0.0	
5/7/2021	Average	20.1	3.4	0.2	110.3	265.4	5.9	23.8	18.8	-5.0	14.3	8.9	9.9	8.5	0.0	0.0	0.0	Off/Start-up
	Min	0.0	0.0	-7.7	-17.8	-17.8	0.0	-17.8	-17.8	-12.2	-17.8	0.0	0.0	0.0	0.0	0.0	0.0	
	Max	20.4	24.2	95.0	365.8	835.0	6.7	33.5	26.4	0.3	16.8	9.8	10.3	8.5	0.1	0.0	0.0	
5/8/2021	Average	17.3	2.0	-12.7	475.8	895.4	5.3	15.8	13.7	-2.1	11.1	10.4	10.2	8.5	0.0	0.0	0.0	Start-up
	Min	-6.3	0.0	-91.3	365.9	835.1	4.6	14.2	12.5	-3.0	6.3	9.8	9.9	8.5	0.0	0.0	0.0	
	Max	20.0	80.8	97.5	527.9	926.9	5.7	16.7	14.4	-0.9	14.4	10.8	11.1	8.5	0.1	0.0	0.0	
5/9/2021	Average	11.0	3.9	58.3	914.3	1058.1	5.4	29.0	38.8	9.8	35.0	7.1	7.2	7.8	37.2	35.0	0.0	Start-up
	Min	7.4	0.0	0.0	544.9	923.8	4.4	14.9	17.2	1.8	13.9	5.0	7.0	7.3	0.1	0.0	0.0	
	Max	20.0	532.5	135.1	1065.9	1094.1	5.6	33.6	42.7	11.6	40.3	8.2	8.5	8.6	39.2	38.8	0.0	
5/10/2021	Average	11.8	3.4	50.4	967.8	1055.1	5.6	31.9	51.7	19.8	44.8	7.5	7.3	7.3	40.7	39.2	0.0	Start-up/Normal(ON)
	Min	10.0	0.0	17.5	877.6	1006.2	5.3	27.4	46.7	10.5	42.0	6.5	7.0	7.2	40.5	38.6	0.0	
	Max	14.1	580.4	152.2	1093.3	1088.5	5.8	37.0	56.8	28.8	48.4	7.9	7.6	7.4	41.0	39.8	0.0	
5/11/2021	Average	11.7	1.9	54.7	996.0	1061.7	5.4	32.3	51.2	18.9	46.0	7.3	7.5	7.2	40.9	39.9	0.0	Normal(ON)
	Min	10.0	0.0	0.8	882.7	1000.2	5.2	26.8	50.1	16.9	43.6	6.7	7.5	7.0	40.4	39.5	0.0	
	Max	14.3	579.2	138.0	1027.7	1103.0	5.6	34.6	52.3	23.7	47.7	7.6	7.8	7.5	41.2	40.9	0.0	
5/12/2021	Average	11.7	2.9	49.3	1018.8	1064.6	5.7	34.6	52.0	17.4	47.8	7.3	7.6	7.3	40.7	41.2	0.0	Normal(ON)
	Min	9.1	0.0	-0.1	831.9	1004.1	5.3	26.6	50.4	13.5	43.2	7.2	7.0	7.0	40.1	40.9	0.0	
	Max	14.0	489.3	377.5	1108.1	1130.6	6.0	38.9	53.0	23.8	50.2	7.7	7.8	7.8	41.1	41.5	1.0	
5/13/2021	Average	11.6	3.9	62.6	1008.1	1068.8	5.9	35.3	53.0	17.7	47.7	7.5	7.0	7.3	41.2	41.1	0.0	Normal(ON)
	Min	9.1	0.0	0.1	908.8	1003.9	5.5	29.3	51.3	13.8	43.7	7.3	6.7	7.0	40.8	40.8	0.0	
	Max	14.2	723.6	377.5	1128.8	1157.0	6.3	40.5	54.9	23.8	51.0	8.0	7.8	7.9	41.6	41.5	1.0	
5/14/2021	Average	11.5	1.4	57.8	981.5	1069.6	5.9	35.4	53.5	18.2	47.3	7.6	7.2	7.3	40.9	41.0	0.0	Normal(ON)
	Min	9.9	0.3	16.1	967.9	1046.6	5.5	32.2	51.0	14.8	44.6	7.2	6.1	7.0	40.2	40.5	0.0	
	Max	12.6	51.4	131.2	1000.4	1136.0	6.3	40.0	55.6	20.0	49.7	8.4	7.5	7.6	41.6	41.7	1.0	
5/15/2021	Average	11.5	1.7	51.1	970.1	1066.5	6.0	34.8	53.6	18.8	46.9	7.9	7.1	7.4	40.4	40.4	0.1	Normal(ON)
	Min	10.4	0.0	15.7	943.9	1052.9	5.7	32.4	47.0	13.8	45.2	7.2	7.1	7.2	40.2	40.0	0.0	
	Max	12.7	426.8	161.0	987.8	1082.4	6.2	37.0	56.5	22.8	48.3	8.3	7.2	7.8	40.9	41.2	1.0	
5/16/2021	Average	11.6	1.7	48.4	999.4	1058.8	5.9	34.3	48.9	14.7	44.6	8.0	7.2	7.3	41.1	41.6	0.0	Normal(ON)
	Min	9.6	0.0	0.1	975.6	974.8	5.6	32.4	47.2	13.0	43.1	8.0	7.1	7.1	40.8	41.2	0.0	
	Max	13.3	685.0	136.3	1043.0	1079.0	6.1	36.0	51.1	17.0	45.7	8.1	7.2	7.6	41.4	41.9	0.0	
5/17/2021	Average	12.3	2.3	34.7	890.9	1040.9	5.9	33.3	51.2	17.9	44.8	8.4	7.1	7.6	41.5	42.1	0.0	Normal(ON)
	Min	5.9	0.0	8.1	598.3	975.5	5.5	28.5	46.2	13.8	40.3	7.8	7.1	7.1	41.0	41.3	0.0	
	Max	14.9	1011.4	114.9	1037.9	1134.9	6.2	35.7	53.8	21.5	47.5	9.4	7.2	8.2	42.2	42.7	0.0	
5/18/2021	Average	11.2	2.5	56.6	963.2	1066.0	6.4	38.1	53.1	14.9	48.5	8.3	7.0	7.3	41.6	42.3	0.4	Normal(ON)
	Min	9.8	0.0	18.1	762.4	1006.9	5.7	35.1	51.4	12.9	45.7	7.4	6.9	7.1	40.8	41.8	0.0	
	Max	12.9	422.2	126.9	995.8	1084.6	7.0	41.5	54.5	18.0	51.2	10.2	7.1	7.6	42.3	42.8	1.0	

May 2021 Incineration Averages, Temperatures Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp	IDFanTemp°C	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Operating Mode
5/19/2021	Average	11.3	1.8	55.5	1001.1	1068.3	6.6	37.0	51.7	14.8	47.6	7.5	6.9	7.3	41.6	42.5	0.2	Normal(ON)
	Min	9.8	0.0	22.5	965.1	1041.3	6.2	31.6	49.0	10.4	44.7	7.4	6.9	7.1	40.9	41.9	0.0	
	Max	12.7	597.7	104.2	1089.4	1102.1	6.9	43.9	54.3	17.5	52.5	7.9	7.0	7.6	42.4	43.2	1.0	
5/20/2021	Average	11.5	1.2	61.2	993.8	1059.5	6.8	36.1	51.8	15.8	47.3	7.6	7.0	7.4	41.4	42.2	0.6	Normal(ON)
	Min	9.9	0.0	0.8	972.2	949.1	6.3	31.6	47.3	10.2	44.5	7.4	7.0	7.0	41.0	41.8	0.0	
	Max	14.6	180.5	175.2	1044.9	1080.2	7.2	37.6	57.0	21.2	49.5	7.8	7.0	7.5	41.9	42.8	1.0	
5/21/2021	Average	11.3	2.4	48.4	986.2	1060.7	6.9	36.1	50.4	14.3	46.9	7.6	7.0	7.4	41.3	42.1	0.3	Normal(ON)
	Min	9.3	0.0	1.6	956.9	826.2	6.6	33.0	48.7	12.3	44.9	7.4	7.0	7.2	41.0	41.9	0.0	
	Max	17.7	574.5	121.4	1028.8	1081.6	7.2	39.9	52.3	15.8	49.5	7.9	7.0	7.6	41.8	42.3	1.0	
5/22/2021	Average	11.1	0.8	52.6	993.4	1067.2	7.2	38.6	51.7	13.1	47.8	7.5	7.0	7.4	41.4	42.1	0.5	Normal(ON)
	Min	9.7	0.0	0.9	963.7	1041.2	6.9	35.5	50.2	11.0	46.1	7.4	7.0	7.2	41.2	42.0	0.0	
	Max	12.6	233.1	110.1	1030.7	1082.9	7.4	42.1	53.2	14.7	50.0	7.7	7.0	7.6	41.6	42.3	1.0	
5/23/2021	Average	11.2	0.9	50.3	971.9	1072.1	7.0	38.3	51.2	12.9	47.2	7.5	7.0	7.4	41.4	42.2	0.7	Normal(ON)
	Min	9.1	0.0	22.6	907.6	1051.7	6.2	33.0	48.0	10.2	43.1	7.4	7.0	7.3	41.2	42.0	0.0	
	Max	13.3	339.8	111.8	1030.4	1158.2	7.4	41.5	53.0	15.1	49.7	7.6	7.0	7.6	41.5	42.4	1.0	
5/24/2021	Average	11.8	3.4	48.1	902.7	1056.9	6.0	32.3	47.1	14.8	42.9	7.5	7.0	7.4	41.5	42.4	0.6	Normal(ON)
	Min	9.5	0.0	11.7	674.4	973.4	5.7	28.3	45.6	10.8	40.4	7.3	7.0	7.1	41.1	42.1	0.0	
	Max	14.1	735.1	140.6	1024.4	1093.2	6.2	37.9	48.8	18.7	46.2	7.8	7.1	7.5	41.7	42.6	1.0	
5/25/2021	Average	11.7	1.9	51.9	1001.8	1064.8	6.8	39.4	52.2	12.9	47.3	7.4	7.0	7.3	40.0	39.9	0.8	Normal(ON)/Shut-down/Off/Start-up
	Min	9.2	0.0	-3.3	939.5	999.3	6.0	33.0	47.6	-4.3	36.3	6.8	7.0	7.1	18.9	18.8	0.0	
	Max	20.0	735.1	181.2	1088.7	1103.4	7.4	56.4	57.0	18.8	49.8	8.0	7.1	7.5	41.7	42.6	1.0	
5/26/2021	Average	11.1	1.1	46.3	1046.7	1057.2	7.1	37.8	52.2	14.4	47.7	7.5	7.0	7.2	40.9	40.5	0.6	Start-up/Normal(ON)
	Min	9.3	0.0	0.9	970.9	998.7	6.2	32.9	47.7	12.2	43.6	6.9	7.0	7.0	40.5	40.4	0.0	
	Max	14.5	393.3	121.1	1087.8	1089.9	7.2	40.7	53.8	16.5	50.1	7.9	7.0	7.5	41.0	40.6	1.0	
5/27/2021	Average	11.2	1.8	69.7	1012.6	1068.5	5.8	34.0	49.4	15.4	43.7	7.5	7.0	7.3	40.6	40.6	0.9	Start-up/Normal(ON)
	Min	9.6	0.0	-0.1	977.2	1021.8	5.4	29.2	45.2	10.6	40.5	7.3	7.0	7.1	39.0	40.4	0.0	
	Max	13.3	291.5	183.3	1047.8	1099.8	6.1	37.9	53.6	19.6	46.0	8.2	7.1	7.4	40.9	40.8	1.0	
5/28/2021	Average	11.3	2.6	58.6	1030.9	1062.4	5.4	31.7	50.6	19.0	43.8	7.5	7.1	7.3	39.1	40.8	1.0	Normal(ON)
	Min	8.7	0.0	0.5	1006.1	978.4	5.1	29.3	49.5	16.5	42.4	7.3	7.0	7.1	39.0	40.7	1.0	
	Max	13.8	409.7	369.2	1071.5	1098.2	5.5	33.8	51.7	21.1	46.0	7.8	7.1	7.5	39.5	40.9	1.0	
5/29/2021	Average	11.7	3.7	50.0	974.2	1038.9	5.4	31.4	50.5	19.1	44.5	7.4	7.1	7.4	39.7	40.7	1.0	Normal(ON)
	Min	9.1	0.0	-0.2	772.9	845.8	5.0	27.7	48.6	14.4	42.6	7.3	7.0	7.1	39.4	40.4	1.0	
	Max	16.5	734.3	378.6	1080.9	1086.9	5.8	37.6	52.8	23.5	48.3	7.6	7.1	7.8	40.7	40.9	1.0	
5/30/2021	Average	11.6	2.6	45.8	1050.4	1051.5	5.7	33.3	52.5	19.2	45.9	7.9	7.0	7.3	41.0	40.6	1.0	Normal(ON)
	Min	8.6	0.0	7.3	961.7	977.6	5.3	28.8	51.0	13.8	43.5	7.2	7.0	7.1	40.4	40.3	1.0	
	Max	14.4	352.4	372.6	1170.2	1099.6	6.0	37.4	54.9	23.5	48.1	9.2	7.1	7.6	41.8	40.8	1.0	
5/31/2021	Average	11.5	4.0	44.3	975.6	1057.8	6.0	33.8	53.3	19.5	47.3	8.9	7.0	7.4	41.3	40.4	1.0	Normal(ON)
	Min	9.2	0.0	0.0	841.8	986.9	5.5	27.8	50.8	16.7	43.7	8.0	7.0	7.1	40.8	40.2	1.0	
	Max	14.9	676.7	128.9	1043.8	1107.8	6.4	37.7	56.1	23.3	49.7	9.2	7.1	7.6	41.8	40.5	1.0	

May 2021 Incineration Feed Log

TheDate	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DailySum	Monthly Total
5/1/2021	0	0	0	502.9	501.8	473.2	402.2	518	500.6	504.6	502.5	519.1	509.6	0	0	501.9	499.9	512.2	532.6	504.6	506.6	521.8	0	38	8552.1	233471.3
5/2/2021	532.4	540.4	533.1	501	551.5	545.2	502.8	505.4	504.7	552.5	501.2	503.3	509.4	504.2	509	500.6	505	502.8	500.2	0	91.8	76.6	0	0	9973.1	
5/3/2021	532.1	550.5	553.5	531.3	510.8	534.5	366	510.1	503.9	504.2	502.8	517.6	501.5	519	501.4	551.6	601.2	670	461.6	0	0	0	0	0	9923.6	
5/4/2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/5/2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/6/2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/7/2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/8/2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/9/2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/10/2021	0	0	0	0	0	0	0	0	0	0	0	0	61	502.5	496.5	0	501.3	501.1	251.5	287.3	501.2	498.8	15	0	3616.2	
5/11/2021	498	513.3	516.5	498.2	501.2	501.2	512.9	509.1	506.2	504.2	503.4	504.7	513	659.9	497.3	502	502.7	519.2	524.5	63.2	132	0	0	0	9982.7	
5/12/2021	501.4	506.5	313	562.7	528.5	557	542.5	507.2	508.9	503.8	504.8	500.2	508.6	519.6	511.3	500.2	502.6	529.8	614.2	131.5	100.1	0	0	30.2	9984.6	
5/13/2021	501.9	505.4	190.4	510.5	553.5	510	245.6	501.4	0	500.3	466.1	501.8	511.2	509.8	503.1	435.4	501.7	505.9	214.6	360.7	500.3	501.9	468.5	0	10000	
5/14/2021	502.9	497.1	180	463.9	522.2	507.4	499.6	499.3	501.8	505	501.3	421	506.6	497	515.4	277.6	501.3	501.2	129.5	308	501	499.9	158.5	0	9997.5	
5/15/2021	496.3	498.6	504.3	523.9	503.4	498.4	421.8	438.7	504.4	511.3	504.3	504.7	510	511.3	504.2	511.2	511.6	504.6	215.5	302.6	204.4	278.2	0	0	9963.7	
5/16/2021	523	519.5	502.8	433.7	463.7	560.8	526.2	74	501.4	43.6	506.2	509.5	504.4	508.6	506.6	503.3	503.2	0	509.4	346.7	146.6	514.5	451.9	16.6	9676.2	
5/17/2021	0	0	0	304.8	516.4	503.2	510.8	131.3	217.4	515.5	506.3	517	507.1	438.1	0	0	0	0	0	0	0	508.8	516.6	0	5693.3	
5/18/2021	534.5	559.8	341.2	525.9	548.2	426.4	412	487.5	512.5	505	299.4	0	511.1	328.1	630.8	497.1	499	501.4	263.6	358.1	500.9	497.7	259.8	0	10000	
5/19/2021	498	493.2	496	513.8	488.4	534	495.2	500.1	498.2	499.1	130	512.8	501.2	504.4	495.8	502.2	506.7	501.2	246.2	419.3	273.9	103	260.6	0	9973.3	
5/20/2021	492.8	492.6	495.9	474.8	503.9	510.5	500.9	512.8	504.7	507.4	507.9	511.9	383	507	508	500.4	502.6	307.8	522.4	306	124.8	156.1	128.3	28.6	9991.1	
5/21/2021	322.3	545.5	541.7	512.3	520	537.9	309	504.1	510.8	504.8	502.4	501.3	510.8	507.5	506	453	44.4	501.6	504.7	406.2	483.5	211.2	11	33.6	9985.6	
5/22/2021	203.8	514.4	371.4	528.7	321	219.3	502	497.6	503.7	492.1	491.6	495.6	496.5	497.3	491.3	498.3	500.3	491.4	190.6	513	502.5	476.2	189.9	0	9988.5	
5/23/2021	492	514.5	465.8	492.7	511.4	619.6	255.9	368	469	462.3	456	506	478.1	476.4	486.2	486.1	462.2	447.1	118.9	227.5	507.2	506.4	160.1	0	9969.4	
5/24/2021	516.5	499.9	499.3	502.5	494.2	492.2	494.1	333.1	0	0	0	0	0	0	0	0	149.8	396	506.2	495.1	498.6	496.8	502.1	0	6876.4	
5/25/2021	495.2	494.6	496.4	510.8	549.8	281.6	467.8	506.5	500	503.4	511.1	197.2	0	526.8	503.8	510.4	505.3	500.9	504.5	230	537.8	280	322.9	35.3	9972.1	
5/26/2021	438.3	535.8	530.2	400.6	276.8	530.6	338.4	514.9	502.6	501.4	502.2	614.6	508.2	522	551.2	510.4	504.8	513.2	0	247.7	508	27.8	224.7	101.6	9906	
5/27/2021	209.9	504.6	264.1	317	518.6	512.4	517.7	480	500.6	512.3	488.5	474.2	503.6	495.6	489.6	491.4	501.9	499.1	235.5	469.4	481.9	524.5	0	0	9992.4	
5/28/2021	497.5	454.8	451.8	492.5	474.3	478.8	553.4	475.8	508.3	496.8	500	500.8	499.7	505.6	500.8	502	502.8	485	155.9	250.8	261.1	246	202.5	0	9997	
5/29/2021	545.9	504.4	496.9	503.7	353.2	476.8	428	511.4	0	594.8	547	511	485	0	514.6	0	0	261.8	509.7	501.2	506.4	524.6	532.7	503.6	9812.7	
5/30/2021	505.4	505	502.6	154.8	550	395.4	419.8	519	553.9	549.2	502	500.7	506.4	505.2	506.4	503.6	506.3	0	170.8	299	16.8	127.8	406.2	509.5	9715.8	
5/31/2021	50.8	157.8	341.2	559.2	517.4	531.8	552.9	409.6	522.5	311.2	429.4	502.6	502.4	529.9	302.8	610.7	581.7	634.9	398.7	456.2	507.8	516.5	0	0	9928	

May 2021 CEM Calibration Log

TheDate	COSpanRes	CO Calgas	COSpan%Drift	NOxSpanRes	NOX Calgas	NOxSpan%drift	O2SpanRes	O2 Calgas	O2SpanDrift	COZeroRes	COZero%Drift	NOxZeroRes	NOxZero%Drift	O2ZeroRes	O2 Zerogas	O2ZeroDrift	Comment
5/1/2021 23:47	0	88.1	0	0	779	0	0	8.08	0	0	0	-1	-0.1	0	0	0	
5/1/2021 23:51	89	88.1	9.00E-02		779	0	0	8.08	0	0	0	0	0	0	0	0	
5/1/2021 23:55	0	88.1	0	645	779	13.4	0	8.08	0	0	0	0	0	0	0	0	
5/1/2021 23:58	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/2/2021 23:48	0	88.1	0	0	779	0	0	8.08	0	0	0	-2	-0.2	0	0	0	
5/2/2021 23:53	88	88.1	1.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/2/2021 23:58	0	88.1	0	655	779	12.4	0	8.08	0	0	0	0	0	0	0	0	
5/3/2021 0:01	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/4/2021 14:17	0	88.1	0	0	779	0	0	8.08	0	0	0	-250	-25	-6.3	0	6.3	
5/4/2021 14:21	0	88.1	0	0	779	0	0	8.08	0	0	0	-250	-25	-6.3	0	6.3	
5/4/2021 18:44	0	88.1	0	0	779	0	-6.2	8.08	14.28	0	0	0	0	0	0	0	
5/5/2021 12:49	0	88.1	0	0	779	0	0	8.08	0	1	0.3333333	-250	-25	-6.3	0	6.3	
5/5/2021 12:53	0	88.1	0	671	779	10.8	0	8.08	0	1	0.3333333	-250	-25	-6.3	0	6.3	
5/5/2021 13:17	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/5/2021 16:16	0	88.1	0	670	779	10.9	0	8.08	0	0	0	0	0	0	0	0	
5/5/2021 16:19	0	88.1	0	673	779	10.6	0	8.08	0	0	0	0	0	0	0	0	
5/5/2021 16:26	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	-0.2	0	0.2	
5/5/2021 16:30	0	88.1	0	778	779	0.1	0	8.08	0	0	0	0	0	-0.2	0	0.2	
5/5/2021 16:35	0	88.1	0	778	779	0.1	0	8.08	0	0	0	0	0	0	0	0	
5/5/2021 16:50	0	88.1	0	0	779	0	0	8.08	0	0	0	-1	-0.1	0	0	0	
5/5/2021 16:58	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/5/2021 17:03	0	88.1	0	780	779	0.1	0	8.08	0	0	0	0	0	0	0	0	
5/5/2021 17:07	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/5/2021 17:13	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/5/2021 17:18	0	88.1	0	777	779	0.2	0	8.08	0	0	0	0	0	0	0	0	
5/5/2021 17:24	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/5/2021 18:49	0	88.1	0	781	779	0.2	0	8.08	0	0	0	0	0	0	0	0	
5/5/2021 18:55	0	88.1	0	0	779	0	0	8.08	0	1	0.3333333	0	0	0.1	0	0.1	
5/5/2021 19:17	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0.1	0	0.1	
5/5/2021 19:27	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/5/2021 19:30	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/5/2021 19:34	0	88.1	0	779	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/6/2021 13:00	0	88.1	0	0	779	0	0	8.08	0	1	0.3333333	0	0	0.1	0	0.1	
5/6/2021 13:11	0	88.1	0	799	779	2	0	8.08	0	0	0	0	0	0	0	0	
5/6/2021 14:50	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/6/2021 14:57	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/6/2021 15:01	0	88.1	0	821	779	4.2	0	8.08	0	0	0	0	0	0	0	0	
5/6/2021 15:05	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/6/2021 15:09	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/6/2021 15:18	90	88.1	0.1900001	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/6/2021 15:24	90	88.1	0.1900001	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/6/2021 15:27	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/6/2021 18:03	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0.1	0	0.1	
5/6/2021 18:07	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/6/2021 18:12	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/6/2021 18:16	0	88.1	0	818	779	3.9	0	8.08	0	0	0	0	0	0	0	0	
5/6/2021 18:21	0	88.1	0	780	779	0.1	0	8.08	0	0	0	0	0	0	0	0	
5/6/2021 18:37	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/6/2021 18:41	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/6/2021 18:45	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/6/2021 18:49	0	88.1	0	790	779	1.1	0	8.08	0	0	0	0	0	0	0	0	
5/10/2021 8:02	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/10/2021 8:06	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/10/2021 8:10	0	88.1	0	760	779	1.9	0	8.08	0	0	0	0	0	0	0	0	



May 2021 CEM Calibration Log

TheDate	COSpanRes	CO Calgas	COSpan%Drift	NOxSpanRes	NOX Calgas	NOxSpan%drift	O2SpanRes	O2 Calgas	O2SpanDrift	COZeroRes	COZero%Drift	NOxZeroRes	NOxZero%Drift	O2ZeroRes	O2 Zerogas	O2ZeroDrift	Comment
5/10/2021 8:14	0	88.1	0	0	779	0	8	8.08	8.00E-02	0	0	0	0	0	0	0	
5/11/2021 8:31	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/11/2021 8:35	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/11/2021 8:39	0	88.1	0	780	779	0.1	0	8.08	0	0	0	0	0	0	0	0	
5/11/2021 8:42	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/12/2021 0:11	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/12/2021 0:15	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/12/2021 0:18	0	88.1	0	775	779	0.4	0	8.08	0	0	0	0	0	0	0	0	
5/12/2021 0:22	0	88.1	0	0	779	0	8.2	8.08	0.1199999	0	0	0	0	0	0	0	
5/12/2021 8:33	0	88.1	0	0	779	0	0	8.08	0	1	0.3333333	0	0	0	0	0	
5/12/2021 8:40	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/12/2021 8:43	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/12/2021 8:47	0	88.1	0	794	779	1.5	0	8.08	0	0	0	0	0	0	0	0	
5/12/2021 8:50	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/13/2021 0:11	0	88.1	0	0	779	0	0	8.08	0	1	0.3333333	0	0	0	0	0	
5/13/2021 0:15	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/13/2021 0:18	0	88.1	0	767	779	1.2	0	8.08	0	0	0	0	0	0	0	0	
5/13/2021 0:22	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/13/2021 2:23	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/13/2021 2:27	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/13/2021 2:30	0	88.1	0	768	779	1.1	0	8.08	0	0	0	0	0	0	0	0	
5/13/2021 2:34	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/13/2021 8:43	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/13/2021 8:47	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/13/2021 8:51	0	88.1	0	779	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/13/2021 8:54	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/16/2021 0:00	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/16/2021 0:03	88	88.1	1.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/16/2021 0:08	0	88.1	0	751	779	2.8	0	8.08	0	0	0	0	0	0	0	0	
5/16/2021 0:11	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/20/2021 0:15	0	88.1	0	0	779	0	0	8.08	0	1	0.3333333	0	0	0	0	0	
5/20/2021 0:20	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/20/2021 0:23	0	88.1	0	723	779	5.6	0	8.08	0	0	0	0	0	0	0	0	
5/20/2021 0:27	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/21/2021 0:15	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0.1	0	0.1	
5/21/2021 0:20	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/21/2021 0:23	0	88.1	0	721	779	5.8	0	8.08	0	0	0	0	0	0	0	0	
5/21/2021 0:27	0	88.1	0	0	779	0	8.2	8.08	0.1199999	0	0	0	0	0	0	0	
5/22/2021 0:07	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0.1	0	0.1	
5/22/2021 0:11	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/22/2021 0:14	0	88.1	0	724	779	5.5	0	8.08	0	0	0	0	0	0	0	0	
5/22/2021 0:18	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/26/2021 0:32	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/26/2021 0:35	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/26/2021 0:39	0	88.1	0	715	779	6.4	0	8.08	0	0	0	0	0	0	0	0	
5/26/2021 0:42	0	88.1	0	0	779	0	8	8.08	8.00E-02	0	0	0	0	0	0	0	
5/27/2021 0:28	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/27/2021 0:31	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/27/2021 0:35	0	88.1	0	714	779	6.5	0	8.08	0	0	0	0	0	0	0	0	
5/27/2021 0:39	0	88.1	0	0	779	0	8	8.08	8.00E-02	0	0	0	0	0	0	0	
5/27/2021 12:02	0	88.1	0	0	779	0	0	8.08	0	0	0	-1	-0.1	0	0	0	
5/27/2021 12:06	0	88.1	0	779	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/27/2021 12:09	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/27/2021 12:12	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	



May 2021 CEM Calibration Log

TheDate	COspanRes	CO Calgas	COspan%Drift	NOxSpanRes	NOX Calgas	NOxSpan%drift	O2SpanRes	O2 Calgas	O2SpanDrift	COZeroRes	COZero%Drift	NOxZeroRes	NOxZero%Drift	O2ZeroRes	O2 Zerogas	O2ZeroDrift	Comment
5/28/2021 9:38	0	88.1	0	0	779	0	0	8.08	0	1	0.3333333	0	0	0	0	0	
5/28/2021 9:42	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/28/2021 9:45	0	88.1	0	779	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/28/2021 9:49	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/29/2021 15:31	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/29/2021 15:35	0	88.1	0	789	779	1	0	8.08	0	0	0	0	0	0	0	0	
5/29/2021 15:41	0	88.1	0	0	779	0	0	8.08	0	1	0.3333333	0	0	0	0	0	
5/29/2021 15:44	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/29/2021 15:48	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/30/2021 0:14	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/30/2021 0:19	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/30/2021 0:23	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/30/2021 0:26	0	88.1	0	786	779	0.7	0	8.08	0	0	0	0	0	0	0	0	
5/30/2021 0:29	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
5/31/2021 1:42	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/31/2021 1:45	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
5/31/2021 1:50	0	88.1	0	776	779	0.3	0	8.08	0	0	0	0	0	0	0	0	
5/31/2021 1:54	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	



Stericycle®

O2 6 minute average < 7.5

O2 < 7.5

	Start	Stop		Op.	Stack		Actions
Date	Time	Time	Duration	Mode	O2 %	Explanation	Taken
5/17/2021	7:32	7:37	0:05	Normal	6.6	Low O2 levels were caused by a CO spike which was caused by a flame port VFD fault.	No waste was fed until O2 levels returned to the normal operating range.

Carbon Monoxide > 8ppm 4 hour alarm



Carbon Monoxide > 8ppm 4 hour alarm

	Start	Stop		Op.	Stack CO	Stack CO		Actions
Date	Time	Time	Duration	Mode	@ 11% O2	as mg/m ³	Explanation	Taken
5/1/2021	12:00	16:00	4:00	normal	12	13.8	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.
5/18/2021	16:00	18:00	2:00	normal	9.6	11.1	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.
5/24/2021	5:00	13:00	8:00	normal	9.4	10.8	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.
5/29/2021	16:00	19:00	3:00	normal	8.5	9.8	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.
5/31/2021	17:00	21:00	4:00	normal	9.7	11.2	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.

Secondary Chamber Temperature < 1000°C

Date	Start Time	Stop Time	Duration	Op. Mode	Temp. °C	Explanation	Actions Taken
5/3/2021	20:46	23:17	2:31	Shut-Down	957	Upper chamber temperature dropped during shut-down due to incorrect flame prot air setpoint.	No action taken at the time, incinerator completed the shut-down cycle.
5/17/2021	14:00	14:34	0:34	Normal	985	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up
5/17/2021	19:32	21:11	1:39	Normal	989	Machine sat idle during shift change	Operator changed the FPA and brought the temperature back up
5/21/2021	16:09	16:48	0:39	Normal	933	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up
5/29/2021	12:36	13:37	1:01	Normal	930	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up
5/29/2021	15:27	17:40	2:13	Normal	947	Machine sat while maintenance was working on SNCR	Operator changed the FPA and brought the temperature back up No waste was fed

Atomizer Amps < 36

	Start	Stop		Op.	Atom. A	Atom. B		Action
Date	Time	Time	Duration	Mode	amps	amps	Explanation	Taken
5/25/2021	11:40:00	12:53:00	1:13:00	Shut-down	27.4	27.8	Low amperage was the result of the incinerator entering the final stage of shut-down.	No waste was fed during this period. Normal amperage was restored once the unit was restarted.



June 2021 Incineration Averages, Temperatures and Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp	IDFanTemp°C	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Operating Mode
6/1/2021	Average	11.6	2.0	67.7	878.9	1060.0	6.4	35.3	52.9	17.6	47.2	8.0	7.0	7.4	40.9	40.8	1.0	Normal(ON)
	Min	8.3	0.0	0.0	683.0	990.9	6.1	29.1	51.0	14.4	43.7	7.6	7.0	7.0	40.6	40.2	1.0	
	Max	15.0	550.9	218.4	980.6	1108.8	6.6	39.3	54.0	21.9	49.3	8.6	7.1	7.8	41.1	41.4	1.0	
6/2/2021	Average	11.5	3.0	57.8	985.5	1061.8	6.4	37.8	52.8	15.0	48.1	7.5	7.1	7.7	40.9	41.1	1.0	Normal(ON)
	Min	9.3	0.0	18.2	903.5	983.8	6.0	30.1	50.6	12.8	43.2	7.2	7.0	7.2	40.8	41.1	1.0	
	Max	14.4	486.2	167.5	1033.6	1108.5	6.7	40.1	53.9	20.5	49.5	8.3	7.1	7.9	41.0	41.2	1.0	
6/3/2021	Average	11.3	2.8	50.3	1001.9	1050.1	7.0	40.6	54.6	13.9	49.7	8.3	7.1	7.6	40.8	41.0	1.0	Normal(ON)
	Min	8.5	0.0	20.1	918.6	900.6	6.5	37.7	53.2	11.3	47.7	7.1	7.0	7.1	40.7	40.8	1.0	
	Max	16.1	486.2	167.5	1047.2	1108.5	7.2	43.2	56.1	20.5	51.6	9.5	7.1	8.1	41.0	41.2	1.0	
6/4/2021	Average	11.2	2.3	46.2	1044.0	1056.5	7.1	41.2	53.8	12.7	49.1	8.1	7.1	7.3	40.9	41.0	1.0	Normal(ON)
	Min	8.5	0.0	0.8	967.1	986.5	7.0	37.4	53.0	9.7	45.8	7.5	7.1	7.1	40.7	40.9	1.0	
	Max	15.2	504.6	142.1	1084.5	1085.5	7.3	43.9	54.7	16.3	51.4	10.8	7.1	7.8	41.0	41.1	1.0	
6/5/2021	Average	11.1	1.8	64.9	1036.8	1060.8	7.2	42.0	53.8	11.8	50.3	8.2	7.1	7.5	40.9	41.0	1.0	Normal(ON)
	Min	8.9	0.0	1.3	940.4	1000.7	7.0	36.8	50.1	8.5	47.2	7.0	7.1	7.2	40.8	40.9	1.0	
	Max	14.0	249.9	241.0	1086.1	1082.2	7.4	45.0	57.0	16.4	52.3	10.4	7.1	7.8	41.1	41.1	1.0	
6/6/2021	Average	11.3	1.3	69.1	1030.9	1068.0	7.3	42.2	52.6	10.4	49.2	7.5	7.1	7.4	40.9	40.8	1.0	Normal(ON)
	Min	9.9	0.0	1.0	986.2	1041.8	7.1	39.2	50.9	8.1	47.2	7.1	7.1	7.1	40.6	40.7	1.0	
	Max	12.5	135.6	286.8	1093.4	1094.9	7.6	44.5	54.1	14.4	50.6	7.8	7.1	7.6	41.0	40.9	1.0	
6/7/2021	Average	11.2	2.0	67.9	1015.2	1069.6	7.5	44.0	53.5	9.5	50.1	7.2	7.1	7.2	40.7	40.6	1.0	Normal(ON)
	Min	9.7	0.0	15.0	928.7	1004.8	7.1	41.8	51.6	7.8	48.4	7.2	7.1	7.0	40.5	40.3	1.0	
	Max	13.2	669.2	294.2	1114.2	1135.5	7.8	46.4	56.6	13.1	51.6	7.3	7.1	7.4	40.9	40.8	1.0	
6/8/2021	Average	11.0	0.7	61.5	984.9	1060.9	7.7	44.1	54.5	10.4	49.2	7.3	7.1	7.2	40.8	40.6	1.0	Normal(ON)
	Min	9.0	0.0	11.9	951.6	972.2	7.5	41.1	51.8	7.3	46.8	7.2	7.1	7.1	40.5	40.5	1.0	
	Max	13.8	44.9	200.4	1015.4	1122.4	7.8	46.6	57.3	15.8	50.9	7.6	7.1	7.4	41.2	40.8	1.0	
6/9/2021	Average	11.0	0.8	55.6	1002.7	1059.9	7.6	41.1	53.8	12.8	48.9	7.3	7.1	7.3	40.8	38.4	1.0	Normal(ON)
	Min	9.4	0.0	-0.1	972.9	1007.8	7.2	37.3	48.0	8.8	46.8	7.1	7.1	7.2	40.5	2.2	1.0	
	Max	14.4	74.7	147.2	1035.7	1082.0	7.8	44.8	55.9	16.3	51.5	7.5	7.1	7.5	41.1	40.8	1.0	
6/10/2021	Average	12.5	7.7	48.0	919.2	1005.4	6.5	35.1	50.3	15.2	43.8	7.4	7.3	7.4	41.8	8.0	0.9	Normal(ON)/Shut-down/Off/Start-up
	Min	8.5	0.0	-0.1	625.0	343.3	6.1	24.5	42.6	5.8	40.1	7.1	6.8	7.0	40.4	0.0	0.0	
	Max	20.4	1921.7	156.8	1063.1	1082.7	7.2	41.0	59.4	31.0	48.7	7.6	7.9	7.9	43.9	40.3	1.0	
6/11/2021	Average	11.8	1.2	79.9	889.1	1069.3	6.6	39.3	54.7	15.4	47.9	7.6	7.1	7.4	44.1	0.0	1.0	Start-up/Normal(ON)
	Min	10.2	0.0	15.3	831.7	1032.4	6.2	35.8	52.4	10.6	45.7	7.3	6.9	7.2	43.8	0.0	1.0	
	Max	13.2	223.1	200.3	974.0	1108.9	6.9	44.1	58.5	19.6	50.5	8.0	7.3	7.5	44.4	0.0	1.0	
6/12/2021	Average	12.0	0.9	62.4	978.5	1059.1	6.7	41.2	54.7	13.5	47.5	7.5	7.0	7.5	44.0	0.0	1.0	Normal(ON)
	Min	10.4	0.0	18.7	961.3	970.6	6.5	37.5	53.9	8.7	45.1	7.3	6.9	7.3	43.7	0.0	1.0	
	Max	14.0	12.1	145.8	1024.9	1123.9	6.8	46.2	55.8	16.6	50.9	7.8	7.4	7.7	44.2	0.0	1.0	
6/13/2021	Average	11.9	0.9	63.7	993.6	1058.4	7.0	42.3	55.0	12.7	49.2	7.8	7.0	7.3	43.9	0.0	1.0	Normal(ON)
	Min	10.3	0.0	0.8	965.0	985.5	6.5	35.6	51.7	9.6	45.9	7.3	6.2	7.2	43.6	0.0	1.0	
	Max	13.8	53.8	148.8	1033.0	1080.6	7.5	46.4	56.5	18.8	51.5	8.7	8.2	7.6	44.3	0.0	1.0	
6/14/2021	Average	11.7	3.8	63.6	1011.1	1059.8	6.8	40.0	52.4	12.4	45.5	8.1	8.1	7.3	43.9	0.0	1.1	Normal(ON)
	Min	9.1	0.0	0.7	953.6	938.5	6.6	35.3	50.8	8.4	43.3	6.8	6.9	7.1	43.7	0.0	1.0	
	Max	14.6	772.7	167.1	1062.4	1083.5	6.9	44.0	54.4	15.8	48.8	10.0	9.8	7.6	44.2	0.0	2.0	
6/15/2021	Average	11.9	2.0	72.1	983.4	1069.8	6.4	38.9	52.6	13.7	45.1	7.6	7.0	7.3	44.0	0.0	1.4	Normal(ON)
	Min	10.2	0.0	0.8	908.2	1035.0	5.9	34.8	49.4	7.6	42.8	7.4	6.9	7.1	43.8	0.0	1.0	
	Max	14.2	332.4	173.6	1066.5	1129.1	6.7	42.0	55.9	20.3	47.2	7.8	7.2	7.5	44.4	0.0	2.0	
6/16/2021	Average	12.0	1.7	63.9	974.0	1068.0	6.0	36.5	55.8	19.3	46.5	8.0	7.0	7.4	44.0	0.0	1.9	Normal(ON)
	Min	10.8	0.3	21.2	958.8	1030.9	5.8	33.1	53.9	17.1	44.7	7.3	6.9	7.3	43.8	0.0	1.0	
	Max	13.2	191.1	148.8	986.1	1093.8	6.2	39.9	57.3	22.1	48.5	9.9	7.1	7.6	44.2	0.0	2.0	
6/17/2021	Average	12.1	1.1	60.7	974.0	1061.2	6.2	37.3	55.2	17.9	46.5	7.5	7.0	7.4	44.1	0.0	2.2	Normal(ON)
	Min	10.7	0.0	20.2	931.1	980.7	5.7	34.7	53.3	15.4	43.7	7.3	6.9	7.3	43.8	0.0	2.0	
	Max	14.1	96.8	147.9	1035.3	1096.2	6.7	39.7	57.2	20.1	49.1	7.9	7.2	7.6	44.4	0.0	3.0	
6/18/2021	Average	11.8	1.1	55.7	996.0	1056.4	6.9	42.3	55.8	13.5	49.4	8.6	7.0	7.5	44.3	0.0	1.7	Normal(ON)
	Min	8.6	0.0	0.4	951.5	988.7	6.3	39.1	52.9	5.0	46.6	7.7	6.3	7.4	44.1	0.0	1.0	
	Max	14.3	286.2	168.3	1042.5	1091.0	7.5	50.6	58.4	19.0	54.8	9.9	7.3	7.7	44.5	0.0	3.0	



June 2021 Incineration Averages, Temperatures and Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp	IDFanTemp°C	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Operating Mode
6/19/2021	Average	11.9	1.5	74.8	912.6	1066.5	7.1	40.6	51.2	10.5	46.4	8.6	6.5	7.4	44.1	0.0	1.9	Normal(ON)
	Min	10.2	0.0	0.6	828.4	984.9	6.9	37.6	49.6	9.0	44.6	7.7	3.8	7.2	43.8	0.0	1.0	
	Max	13.7	445.5	181.4	1005.6	1099.4	7.5	43.3	52.9	12.0	50.6	9.3	7.0	7.7	44.5	0.0	2.0	
6/20/2021	Average	11.8	1.9	52.3	891.1	1063.5	6.9	39.3	50.2	10.9	44.7	8.0	6.9	7.5	44.1	0.0	2.0	Normal(ON)/Shut-down
	Min	9.6	0.0	22.5	827.4	995.0	6.6	36.5	48.2	8.3	42.4	7.7	6.8	7.3	43.8	0.0	2.0	
	Max	13.5	719.8	124.0	954.4	1185.8	7.4	42.1	52.0	12.7	47.2	8.5	7.0	7.7	44.5	0.0	2.0	
6/21/2021	Average	18.1	0.1	21.3	846.7	764.7	7.7	33.5	40.0	6.5	35.4	7.7	7.1	8.0	15.6	0.0	0.8	Shut-down/Off
	Min	8.8	0.0	0.0	655.7	467.5	7.1	18.2	25.4	-0.4	25.4	7.7	6.9	7.5	0.1	0.0	0.0	
	Max	20.4	22.7	164.2	979.8	1255.7	8.3	46.8	52.9	10.6	48.9	7.8	7.5	8.2	44.3	0.0	3.0	
6/22/2021	Average	18.2	0.2	21.2	846.7	763.5	7.7	33.5	40.0	6.5	35.4	7.7	7.1	8.0	15.5	0.0	0.8	Shut-down/Off
	Min	8.8	0.0	0.0	655.7	467.5	7.1	18.2	25.4	-0.4	25.4	7.7	6.9	7.5	0.1	0.0	0.0	
	Max	20.4	22.7	164.2	979.8	1255.7	8.3	46.8	52.9	10.6	48.9	7.8	7.5	8.2	44.3	0.0	3.0	
6/23/2021	Average	19.0	0.0	5.3	36.0	54.6	7.6	30.2	25.9	-4.3	17.2	8.1	7.1	7.8	0.0	0.0	1.3	OFF
	Min	11.5	0.0	0.0	30.0	34.8	6.6	18.4	16.6	-8.6	14.9	7.7	6.8	7.3	0.0	0.0	0.0	
	Max	20.4	0.0	95.0	48.0	84.4	8.3	45.0	24.0	1.3	20.5	8.5	7.5	8.2	0.0	0.0	3.0	
6/24/2021	Average	18.2	0.0	0.0	36.0	54.0	7.8	17.0	51.0	6.4	16.0	7.7	7.2	8.0	0.0	0.0	0.8	OFF
	Min	8.8	0.0	0.0	30.0	34.0	6.6	44.0	23.0	-8.6	13.0	7.7	6.8	7.3	0.0	0.0	0.0	
	Max	20.4	0.0	9.0	48.0	84.0	8.3	46.8	52.9	10.6	19.0	8.5	7.5	8.2	0.0	0.0	3.0	
6/25/2021	Average	18.2	0.0	0.0	30.0	54.0	7.8	33.4	39.8	6.4	35.2	7.7	7.2	8.0	0.0	0.0	0.8	OFF
	Min	8.8	0.0	0.0	30.0	34.0	6.6	17.0	16.6	-8.6	13.0	7.7	6.8	7.3	0.0	0.0	0.0	
	Max	20.4	0.0	0.0	48.0	84.0	8.3	46.8	52.9	10.6	48.9	8.5	7.5	8.2	0.0	0.0	3.0	
6/26/2021	Average	18.2	0.0	0.0	30.0	34.0	7.8	33.4	39.7	6.4	35.1	7.7	7.2	8.0	0.0	0.0	0.8	OFF
	Min	8.8	0.0	0.0	30.0	30.0	6.6	17.0	16.6	-8.6	13.0	7.7	6.8	7.3	0.0	0.0	0.0	
	Max	20.4	0.0	0.0	38.0	83.0	8.3	46.8	52.9	10.6	48.9	8.5	7.5	8.2	0.0	0.0	3.0	
6/27/2021	Average	18.3	0.0	0.0	30.0	50.0	7.8	33.3	39.7	6.3	35.1	7.7	7.2	8.0	0.0	0.0	0.8	OFF
	Min	8.8	0.0	0.0	30.0	30.0	6.6	17.0	16.6	-8.6	13.0	7.7	6.8	7.3	0.0	0.0	0.0	
	Max	20.4	0.0	0.0	38.0	75.0	8.3	46.8	52.9	10.6	48.9	8.5	7.5	8.2	0.0	0.0	3.0	
6/28/2021	Average	11.3	0.2	39.5	473.2	1023.7	7.5	35.4	52.6	17.2	47.2	7.8	7.2	7.5	39.9	39.6	0.0	Start-up
	Min	11.0	0.0	-0.5	278.7	875.0	7.4	34.3	51.0	15.6	45.7	7.5	7.0	7.0	39.8	39.4	0.0	
	Max	14.5	70.6	51.6	628.4	1060.4	7.5	36.0	60.8	26.4	48.6	10.0	7.3	8.0	40.0	40.1	0.0	
6/29/2021	Average	11.4	1.7	65.0	790.1	1057.7	7.6	37.6	52.1	14.5	49.5	9.5	7.0	7.7	40.1	40.0	0.0	Start-up/Normal(ON)
	Min	8.2	0.0	23.1	628.7	963.4	7.4	34.7	51.3	9.6	47.8	7.9	6.9	7.3	39.9	39.2	0.0	
	Max	14.6	565.2	318.7	942.0	1080.7	7.9	41.7	52.8	17.6	52.6	10.5	7.2	8.0	40.2	40.7	0.0	
6/30/2021	Average	11.7	1.7	73.7	898.2	1047.4	7.4	38.7	51.2	12.5	48.7	7.9	7.0	7.5	40.4	40.7	0.0	Normal(ON)
	Min	8.1	0.0	16.5	731.1	731.4	7.1	32.7	49.9	8.2	45.0	7.4	6.9	7.1	40.1	40.5	0.0	
	Max	19.3	182.6	237.4	973.6	1090.8	7.6	42.8	52.0	17.2	51.6	8.8	7.1	7.8	40.5	40.9	0.0	



June 2021 Incineration Feed Log

TheDate	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DailySum	Monthly Total
6/1/2021	0	649.6	372.8	100	511.8	520.2	512.6	589.5	607.5	0	0	394.1	583.3	316.8	452.8	493.7	443	500.6	585.2	658.7	344.4	497.5	475.9	365.2	9975.2	203320.2
6/2/2021	498.1	493.2	595	670	0	0	607.5	121.5	461	480.7	544.8	494.3	592.1	670	25.8	588.8	663.6	494.7	517.4	0	20.4	447.8	608.4	13.7	9608.8	
6/3/2021	556	247.7	369.8	598.6	566.7	439.97	246.8	501.2	308.2	479.6	311.7	666	285.3	511.4	114.2	464.8	286.4	588.8	168.7	364.2	525.8	194.2	539.4	0	9335.47	
6/4/2021	0	502.5	502.1	521	514.2	510	551.7	512	506.6	500.1	607.7	506.7	521.1	502.3	507	510.1	527.5	505.5	373.5	500.8	241.4	58.2	0	0	9982	
6/5/2021	510.8	533.9	559.5	534	562.6	509.8	139.2	481.4	495	502.1	494.4	0	0	0	0	0	0	0	513.5	88	374.8	402.8	495	0	7196.8	
6/6/2021	454.1	450.3	480.4	476	482.6	454.6	495.6	409.1	474.3	489.2	484.2	500.1	485.1	491.1	449.9	498.5	502.7	513.3	216	236	248.2	413.1	279.6	0	9984	
6/7/2021	527.2	498.4	492.5	493.6	506.9	505.6	502.8	311.9	329.4	375.1	530	503.6	502.1	511.8	524.3	484.3	429.4	318.5	221.9	282.6	322.8	302.7	492.6	0	9970	
6/8/2021	498.8	495.7	493	452.6	301.5	513.4	534.5	54.6	313.6	506.6	507.4	507.8	519.4	502.6	510.5	521.1	502.5	502.6	503.9	421.4	544.2	266.2	0	0	9973.9	
6/9/2021	216.7	552.9	417.2	528	149.9	543.6	549.2	524.4	506.6	510.9	540.2	503.2	506	506.7	504.6	510.7	502.5	508.2	502	457	401.1	0	42.1	0	9983.7	
6/10/2021	427.4	556.5	546.4	488.9	217.3	573.7	314.9	259.3	0	0	0	0	0	0	0	0	0	0	0	0	507.6	496.2	491.3	420.5	5300	
6/11/2021	513.9	529	501.1	502.2	485	407.3	521	311.7	501.6	489.7	513.9	503	497.8	421.9	502.6	500.6	399.6	511.9	205.1	420.8	201.2	199.8	207.2	0	9847.9	
6/12/2021	419.6	498.4	499.6	495.8	490.3	509.7	510.7	509.3	501.1	505.8	563.6	548.4	516.5	502	521.5	516.8	603.4	503.4	195	352.1	201.9	0	0	0	9964.9	
6/13/2021	402.1	565.8	540.6	522.4	395.6	544	401.3	500.3	504.7	503.6	505.6	502.5	480	502.6	512.5	503	529.9	503.4	0	503.4	212.3	335.8	0	0	9971.4	
6/14/2021	253.4	504.4	341.8	513.9	538.1	552	524.8	498.3	501.7	502.3	508.9	504	503.4	504.4	506.6	502.2	501.6	504.6	500.1	373.7	316.4	10.9	0	0	9967.5	
6/15/2021	417.1	554.9	520.5	532.5	534.1	553.5	204	486.1	503.8	231.4	497.2	330.9	427.3	367.5	502.3	513.2	529.2	525.3	187	408.6	393.1	395	311.3	56.5	9982.3	
6/16/2021	499.2	499.8	514.3	483.7	504	412.7	509	479.5	423	492.6	493.4	484	483.9	481	491.1	476.8	477.5	494.7	215.1	206.6	209.5	535.5	119.7	0	9986.6	
6/17/2021	493.8	496.3	452.1	498.3	456.2	432.4	502.7	507.4	520.7	519	517.5	600.9	495.1	503.5	504.6	503.7	500.2	508.3	582.6	372.1	0	0	0	0	9967.4	
6/18/2021	506	545.1	551.6	534	566.7	531.2	114.2	0	511.1	502.4	537	503.2	497.3	499.9	511.4	511	503.2	445	496.8	157.9	416.6	250.7	260.3	39.3	9991.9	
6/19/2021	475.6	539.6	216.8	571.9	551.3	555.2	534.2	497	456.9	491.8	453.5	482.3	0	0	503.1	406.8	510	518.6	301.4	304.2	514	497.1	501.5	94.8	9977.6	
6/20/2021	506.4	498.7	495	509.3	477.5	507.4	442.8	128.6	319.6	301.1	411.6	490.7	473.3	444.6	302.3	328.1	313.5	300.7	237.3	495.9	629	652.8	559.9	173.9	10000	
6/21/2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/22/2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/23/2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/24/2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/25/2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/26/2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/27/2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/28/2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/29/2021	0	0	0	0	0	0	0	0	0	0	0	500.1	521.4	499.5	363	0	456.8	500.4	292.4	249	358.1	419.3	399.8	569.9	5129.7	
6/30/2021	508.9	500.8	460.9	512.1	297.8	0	0	111.5	0	0	140.7	515.9	516.9	485.6	495.2	491.4	220.8	0	0	0	503.2	497.6	457.4	506.4	7223.1	



June 2021 CEM Calibration Log

TheDate	COSpanRes	CO Calgas	COSpan%Drift	NOxSpanRes	NOX Calgas	NOxSpan%drift	O2SpanRes	O2 Calgas	O2SpanDrift	COZeroRes	COZero%Drift	NOxZeroRes	NOxZero%Drift	O2ZeroRes	O2 Zerogas	O2ZeroDrift	Comment
6/1/2021 0:08	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
6/1/2021 0:12	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
6/1/2021 0:15	0	88.1	0	759	779	2	0	8.08	0	0	0	0	0	0	0	0	
6/1/2021 0:19	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
6/1/2021 8:07	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
6/1/2021 8:11	88	88.1	1.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
6/1/2021 8:15	0	88.1	0	771	779	0.8	0	8.08	0	0	0	0	0	0	0	0	
6/1/2021 8:18	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
6/4/2021 0:48	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
6/4/2021 0:52	88	88.1	1.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
6/4/2021 0:55	0	88.1	0	756	779	2.3	0	8.08	0	0	0	0	0	0	0	0	
6/4/2021 0:58	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
6/5/2021 0:27	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0.1	0	0.1	
6/5/2021 0:31	88	88.1	1.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
6/5/2021 0:35	0	88.1	0	741	779	3.8	0	8.08	0	0	0	0	0	0	0	0	
6/5/2021 0:38	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
6/6/2021 7:55	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0.1	0	0.1	
6/6/2021 7:59	88	88.1	1.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
6/6/2021 8:02	0	88.1	0	738	779	4.1	0	8.08	0	0	0	0	0	0	0	0	
6/6/2021 8:06	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
6/9/2021 0:24	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0.1	0	0.1	
6/9/2021 0:27	88	88.1	1.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
6/9/2021 0:31	0	88.1	0	743	779	3.6	0	8.08	0	0	0	0	0	0	0	0	
6/9/2021 0:35	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
6/10/2021 0:29	0	88.1	0	0	779	0	0	8.08	0	0	0	-1	-0.1	0.1	0	0.1	
6/10/2021 0:33	88	88.1	1.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
6/10/2021 0:36	0	88.1	0	730	779	4.9	0	8.08	0	0	0	0	0	0	0	0	
6/10/2021 0:40	0	88.1	0	0	779	0	8.2	8.08	0.1199999	0	0	0	0	0	0	0	
6/13/2021 0:31	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0.1	0	0.1	
6/13/2021 0:36	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
6/13/2021 0:39	0	88.1	0	746	779	3.3	0	8.08	0	0	0	0	0	0	0	0	
6/13/2021 0:43	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
6/14/2021 0:22	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0.1	0	0.1	
6/14/2021 0:26	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
6/14/2021 0:30	0	88.1	0	737	779	4.2	0	8.08	0	0	0	0	0	0	0	0	
6/14/2021 0:33	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
6/15/2021 0:27	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0.1	0	0.1	
6/15/2021 0:31	88	88.1	1.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
6/15/2021 0:34	0	88.1	0	754	779	2.5	0	8.08	0	0	0	0	0	0	0	0	
6/15/2021 0:38	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
6/18/2021 0:23	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0.1	0	0.1	
6/18/2021 0:28	89	88.1	9.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
6/18/2021 0:31	0	88.1	0	740	779	3.9	0	8.08	0	0	0	0	0	0	0	0	
6/18/2021 0:34	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
6/19/2021 0:22	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0.1	0	0.1	
6/19/2021 0:25	88	88.1	1.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
6/19/2021 0:29	0	88.1	0	728	779	5.1	0	8.08	0	0	0	0	0	0	0	0	
6/19/2021 0:32	0	88.1	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	

Carbon Monoxide > 8ppm 12 hour alarm



Carbon Monoxide > 8ppm 12 hour alarm

	Start	Stop		Op.	Stack CO	Stack CO		Actions
Date	Time	Time	Duration	Mode	@ 11% O2	as mg/m ³	Explanation	Taken
6/10/2021	14:00	15:00	1:00	Normal	8.2	9.5	The CO increased due to the secondary chamber burner shutting down and not being able to relight due to excessive air going through the burner.	that the operator on duty was working to increase the flame port air fan minimum as he was starting to feed after we had sat due to an issue with the atomizer. Around 12:20 the operator mistakenly went from the flame port air screen to the burner screen. The operator did not notice the change in screens (they are very similar looking). By increasing the minimum on the burner, he was making virtually no change to the incinerator until the secondary chamber increased above 1980F. At which point the secondary burner shuts down. Once the burner shut down, the blower was still blowing at 55% of the fans maximum speed. Due to this, the burners safeties did not allow the burner to restart. Stericycle Maintenance investigated and found the incorrect setting. Maintenance adjusted the setpoint to the proper range and the burner restarted.

Carbon Monoxide > 8ppm 4 hour alarm



Carbon Monoxide > 8ppm 4 hour alarm

	Start	Stop		Op.	Stack CO	Stack CO		Actions
Date	Time	Time	Duration	Mode	@ 11% O2	as mg/m ³	Explanation	Taken
6/1/2021	10:00	12:00	2:00	normal	9	10.4	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.
6/2/2021	5:00	6:00	1:00	normal	9	10.4	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.
6/10/2021	14:00	18:00	4:00	normal/shut-down	15.3	17.7	The CO increased due to the secondary chamber burner shutting down and not being able to relight due to excessive air going through the burner.	Upon investigation it was found that the operator on duty was working to increase the flame port air fan minimum as he was starting to feed after we had sat due to an issue with the atomizer. Around 12:20 the operator mistakenly went from the flame port air screen to the burner screen. The operator did not notice the change in screens (they are very similar looking). By increasing the minimum on the burner, he was making virtually no change to the incinerator until the secondary chamber increased above 1980F. At which point the secondary burner shuts down. Once the burner shut down, the blower was still blowing at 55% of the fans maximum speed. Due to this, the burners safeties did not allow the burner to restart. Stericycle Maintenance investigated and found the incorrect setting. Maintenance adjusted the setpoint to the proper range and the burner restarted.

Carbon Monoxide > 8ppm 4 hour alarm

6/14/2021	3:00	5:00	2:00	normal	8.3	9.6	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.
6/15/2021	0:00	3:00	3:00	normal	10.1	11.7	CO spikes caused by the incinerator sitting idle after 10000kg was achieved	Operator monitored the machine and slowed feeding as needed.

Secondary Chamber Temperature < 1000°C

Date	Start Time	Stop Time	Duration	Op. Mode	Temp. °C	Explanation	Actions Taken
6/3/2021	18:35	19:24	0:49	Normal	942	Machine sat idle during shift change	Operator changed the FPA and brought the temperature back up
6/10/2021	10:56	11:29	0:33	Normal	971	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up
6/30/2021	18:27	19:26	0:59	Normal	847	Machine sat idle during shift change	Operator changed the FPA and brought the temperature back up

Atomizer Amps < 36

	Start	Stop		Op.	Atom. A	Atom. B		Action
Date	Time	Time	Duration	Mode	amps	amps	Explanation	Taken
6/9/2021	21:29:00	36:03:00	14:34:00	Normal /Shut-d	40.7	6.5	Low amerag in Atomizer B was caused by a faulty lube oil pressure sensor.	Stericycle maintenance shut-down the atomizer and the incinerator ran on 1 rotarty atomizer until the the pressure sensor was replaced. MECP was notified in writing on June 11 2021.

Differential from Demister < 10 C



Differential from Demister < 10°C

	Start	Stop		Op.	Differential Temp		Actions
Date	Time	Time	Duration	Mode	Outlet °C	Explanation	Taken
6/5/2021	20:08	1:20	5:12	Normal	9.5	High Ambient temperatures caused the Demister temperature to rise	Operator waited until the Demister temperature reduced to its normal values
6/6/2021	3:57	8:39	4:42	Normal	9	High Ambient temperatures caused the Demister temperature to rise	Operator waited until the Demister temperature reduced to its normal values
6/7/2021	0:23	8:11	7:48	Normal	9	High Ambient temperatures caused the Demister temperature to rise	Operator waited until the Demister temperature reduced to its normal values
6/7/2021	11:43	20:58	9:15	Normal	8.8	High Ambient temperatures caused the Demister temperature to rise	Operator waited until the Demister temperature reduced to its normal values
6/7/2021	21:58	9:46	11:48	Normal	8.9	High Ambient temperatures caused the Demister temperature to rise	Operator waited until the Demister temperature reduced to its normal values
6/10/2021	0:46	10:10	9:24	Normal	7.5	High Ambient temperatures caused the Demister temperature to rise	Operator waited until the Demister temperature reduced to its normal values
6/15/2021	11:46	14:53	3:07	Normal	8.6	High Ambient temperatures caused the Demister temperature to rise	Operator waited until the Demister temperature reduced to its normal values
6/18/2021	4:36	8:31	3:55	Normal	7	High Ambient temperatures caused the Demister temperature to rise	Operator waited until the Demister temperature reduced to its normal values
6/19/2021	23:03	2:56	3:53	Normal	8.9	High Ambient temperatures caused the Demister temperature to rise	Operator waited until the Demister temperature reduced to its normal values
6/21/2021	0:14	3:35	3:21	Shut-down	7.4	High Ambient temperatures caused the Demister temperature to rise	Operator waited until the Demister temperature reduced to its normal values

Differential from Demister < 10 C

6/30/2021	4:11	7:21	3:10	Normal	8.8	High Ambient temperatures caused the Demister temperature to rise	Operator waited until the Demister temperature reduced to its normal values
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