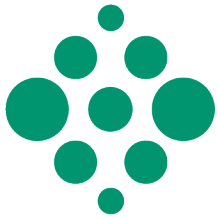


Stericycle®

2021 Q3 Incineration Report

Stericycle, ULC
95 Deerhurst Drive
Brampton, ON
L6T 5R7
Tel.: (905) 789-6008
Fax: (905) 789-5549

October 25th, 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 third quarter of 2021.

During July 2021 there were 10 occurrences of the 4-hour CO alarm & 0 occurrences of the 12-hour CO alarm. In August 2021 there were 6 occurrences of the 4-hour CO alarm and 0 occurrences of the 12-hour CO alarm. In September 2021 there were 8 occurrences of the 4-hour CO alarm and 2 occurrences of the 12-hour CO alarm. Both 12 hour CO alarms in September occurred as the incinerator was put into "Normal" mode and the stack cap closed during the start up procedure. The conversion to a normalized CO (11% O2) created this jump. 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 Q3 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 two (2) times during Q2 2021. A detailed description in provided in this report.

- 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 third quarter of 2021.

- Stericycle Inc. operated the incinerator on the following days during the third quarter:

Start-up	Shut Down
06/28/2021 @ 10:10	07/04/2021 @ 10:22
07/04/2021 @ 16:32	07/05/202 @ 05:17
07/05/2021 @ 09:18	07/08/2021 @ 14:13
07/08/2021 @ 19:17	07/13/2021 @ 09:17
07/15/2021 @ 16:32	08/04/2021 @ 11:26
08/04/2021 @ 17:21	08/08/2021 @ 11:40
08/14/2021 @ 08:57	08/16/2021 @ 07:20
08/16/2021 @ 11:25	08/22/2021 @ 06:26
08/22/2021 @ 08:55	08/31/2021 @ 11:32
08/31/2021 @ 13:40	09/08/2021 @ 05:00
09/08/2021 @ 09:00	09/18/2021@ 17:56
09/18/2021 @ 22:01	09/20/2021 @ 08:34
09/20/2021 @ 12:50	09/24/2021 @ 08:43
09/24/2021 @ 13:13	09/26/2021 @ 04:32
09/27/2021 @ 10:28	

During Q3 of 2021 routine maintenance was performed on the incinerator during the scheduled shutdowns.

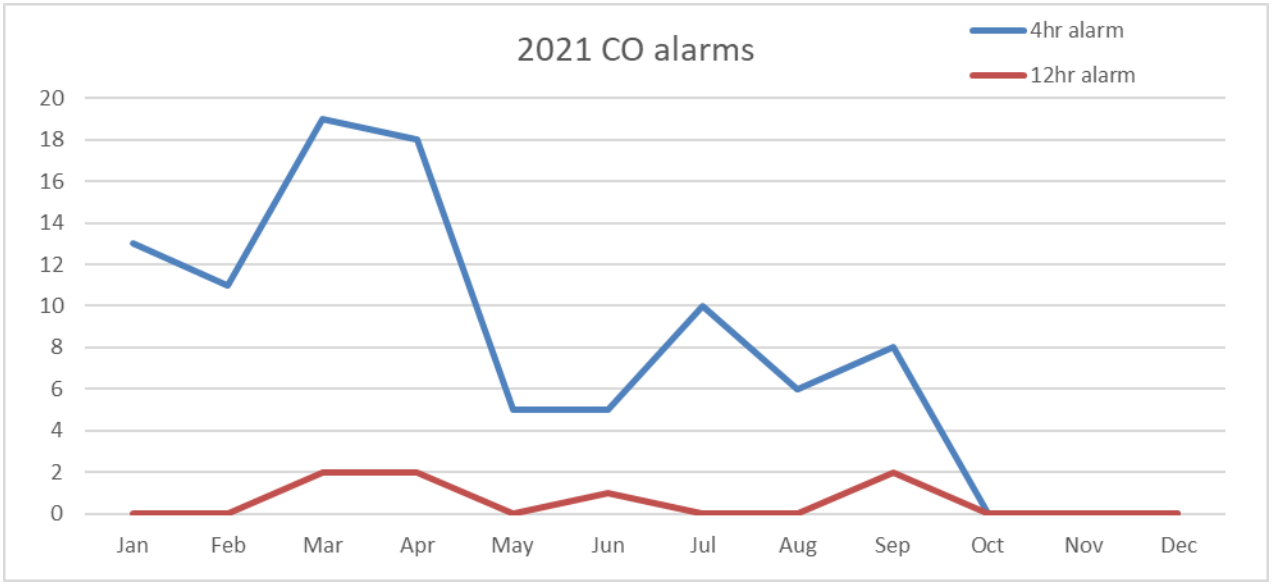
- Replacement of refractory in the secondary chamber
- Rebuild of the atomizer gearbox (Atomizer A)

Emergency Bypass Summary

Date	Start Time	End Time	Duration	Emission Volume (m^3)	Reason	Corrective Action
7/4/2021	1:30		0:23	83.85	Incinerator experienced 15 separate short bypass events each lasting 1 - 2 minutes between 01:30 July 4th 2021 & 17:14 July 5th 2021. Incinerator was brought to a shut-down at 10:22 on July 4 2021 as SRCL maintenance could not accurately diagnose the cause of the bypasses.	SRCL maintenance found that an intermittent fault on a Quench tank water level sensor was was causing high Quench tank temperature signals which in turn trigger a shut-down of the ID fan and APC system and opening of the stack cap to protect the APC system. Maintenance replaced the sensor and normal operations resumed at 17:30 on July 5 2021.
7/16/2021	13:15	13:59	0:44	160.42	At approximately 13:15 on July 16 a bypass occurred due to a PLC fault on the APC system. SRCL OSI Conan Fonseca called the MECP SAC to report the bypass. MECP SAC reference number 1-T3M1F. The reported cause of the bypass after investigation was a fault in the APC system PLC programming.	SRCL maintenance contacted SRCL's PLC programmed who remotely corrected the programming error. The stack was closed at 13:59. SRCL Facility Manager William Leger placed a follow-up call to the MECP SAC at approximately 16:52 & spoke to Shannon @ the MECP SAC to report the closing of the stack at approximately 13:59 and the return to normal operation.

CO Alarm Chart Q3 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	10	0
August	6	0
September	8	2
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 Q3 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,

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

Stericycle
Protecting People. Reducing Risk.™

July 9, 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 #: 8714-C4LA7W

On July 4th, 2021 at approximately 01:30 the emergency bypass stack was opened due to an intermittent fault in a Quench tank water level sensor.

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 total duration of twenty-three (23) 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 July 4th, 2021 at approximately 01:40 a call was placed to the Spills Action Control center by Stericycle Maintenance Technician Shayne Lewis to report the use of the emergency bypass stack. At approximately 01:26 the incinerator bypass stack opened due to an intermittent failure of a water level sensor on the quench pump that triggered a high Quench tank temperature alarm which in turn shut-down the I.D fan on the APC system which caused the emergency bypass stack to open. The incinerator experienced 15 separate short bypass events each lasting 1 - 2 minutes between 01:30 July 4th, 2021 & 17:14 July 5th, 2021. Incinerator was brought to a shut-down at 10:22 on July 4, 2021 as SRCL maintenance could not accurately diagnose the cause of the bypasses. SRCL maintenance found that an intermittent fault on a Quench tank water level sensor was causing high Quench tank temperature signals which in turn trigger a shut-down of the ID fan and APC system and opening of the stack cap to protect the APC system. Maintenance replaced the sensor and normal operations resumed at 17:30 on July 5, 2021.

During the bypass approximately 83.85m^3 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 on July 5, 2021.

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

Kokol, Dan

From: Broux, Christelle (MECP) <Christelle.Broux@ontario.ca>
Sent: Monday, July 12, 2021 2:32 PM
To: Kokol, Dan
Subject: RE: Stericycle - reported bypass July 4 2021 Ref# 8714-C4LA7W

Thank you Dan. I will proceed to close this incident.

Regards,

Christelle Broux
Senior Environmental Officer (P.O. #1896)
Halton Peel District Office | Ministry of Environment, Conservation and Parks (MECP)
4145 North Service Rd, Suite 300 | Burlington, ON | L7L 6A3
christelle.broux@ontario.ca | **289-208-5057**

Spills/After-Hours: 1-800-268-6060

Ontario

From: Kokol, Dan <DKokol@STERICYCLE.com>
Sent: July-12-21 8:58 AM
To: Broux, Christelle (MECP) <Christelle.Broux@ontario.ca>
Subject: RE: Stericycle - reported bypass July 4 2021 Ref# 8714-C4LA7W

Good morning Christelle,
Attached is the follow-up report to the reported bypass event at the Stericycle Deerhurst site reference # 8714-C4LA7W.

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Dan Kokol
EHS Specialist
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From: Broux, Christelle (MECP) <Christelle.Broux@ontario.ca>
Sent: Friday, July 9, 2021 5:14 PM
To: Kokol, Dan <DKokol@STERICYCLE.com>
Subject: RE: Stericycle - reported bypass July 4 2021

Hi Dan,

The reference number for the July 4th call to SAC is **8714-C4LA7W**.

Will wait for your follow up report.

Regards,

Christelle Broux
Senior Environmental Officer (P.O. #1896)
Halton Peel District Office | Ministry of Environment, Conservation and Parks (MECP)
4145 North Service Rd, Suite 300 | Burlington, ON | L7L 6A3
christelle.broux@ontario.ca | **289-208-5057**

Spills/After-Hours: 1-800-268-6060

Ontario

From: Kokol, Dan <DKokol@STERICYCLE.com>
Sent: July-09-21 1:56 PM
To: Broux, Christelle (MECP) <Christelle.Broux@ontario.ca>
Subject: Stericycle - reported bypass July 4 2021

Hi Christelle,
I am preparing the follow-up report for the reported bypass that took place at the Deerhurst site @ approximately 01:30 on July 4. The Stericycle team member that called in the bypass did not write the reference number he was given down on the report. Could you please send me the reference number so I can include in the follow-up summary.

Thanks,

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EHS Specialist
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July 23, 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 #: 1-Y3M1F

On July 16th, 2021 at approximately 13:15 the emergency bypass stack was opened due to a fault in the PLC programming on the Air Pollution Control (APC) system.

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 total duration of 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 July 16th, 2021 at approximately 13:20 a call was placed to the Spills Action Control center by Stericycle Operations Supervisor Conan Fonseca to report the use of the emergency bypass stack. At approximately 13:15 the bypass stack on the incinerator opened. The maintenance manager was at the machine and was troubleshooting the carbon reheat valve. He pressed the button on the system that forces the valve open, and when he released the button the Air pollution control system shut down. The maintenance manager immediately went to the air pollution controls electrical panel and started troubleshooting. He called the Facility Manager and got the Facility manager to call the engineering teams programmer to investigate the issue. The maintenance manager found a fault on the PLC for the APC which is what shut down the system. The facility manager spoke to the programmer and he was unavailable for 20-40 minutes.

After about 20 minutes, another call was made to a different programmer in Stericycle. He was able to log into the system and found a value in the PID loop for the Carbon reheat valve was wrong. According to the facility managers recollection, the max set point was set to zero which is what was causing the fault. Once that zero was changed to a normal value, the APC was able to be started back up and the stack was closed at 13:59.

Upon further communication with the programmers, it appears that the PID loop for the carbon reheat valve was not actually functioning while we were running. Once the maintenance manager pressed the button to force the valve open, it shut off the PID loop and restarted it when he let go of the button. This caused the PLC to fault because it then recognized the wrong value.

The original programmer logged into the PLC and reinstalled a working program and troubleshot any issues with the maintenance manager. Then the incinerator was started back up with the valve functioning properly.

During the bypass approximately 160.42m^3 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 on July 16, 2021 at 16:52 to report the APC system was back online and the emergency bypass stack was closed.

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

Kokol, Dan

From: Broux, Christelle (MECP) <Christelle.Broux@ontario.ca>
Sent: Monday, July 26, 2021 2:10 PM
To: Kokol, Dan
Subject: RE: Emergency Bypass Follow-up Report Ref # 1-3M1F

Thank you Dan. I will proceed to close this incident.

Christelle Broux
Senior Environmental Officer (P.O. #1896)
Halton Peel District Office | Ministry of Environment, Conservation and Parks (MECP)
4145 North Service Rd, Suite 300 | Burlington, ON | L7L 6A3
christelle.broux@ontario.ca | **289-208-5057**

Spills/After-Hours: 1-800-268-6060

Ontario

From: Kokol, Dan <DKokol@STERICYCLE.com>
Sent: July-23-21 4:02 PM
To: Broux, Christelle (MECP) <Christelle.Broux@ontario.ca>
Subject: Emergency Bypass Follow-up Report Ref # 1-3M1F

Good afternoon Christelle,
Attached is the emergency bypass follow-up report for the reported use of Stericycle's emergency bypass stack on July 16th 2021.

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Dan Kokol
EHS Specialist
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July 2021 Incineration Averages Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp°C	IDFanTemp	QunchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Operating Mode
7/1/2021	Averages	11.24	1.41	65.67	975.99	1056.96	6.99	38.45	50.75	12.31	47.79	8.16	7.06	7.43	40.14	40.64	0.00	Normal(ON)
	Min	8.38	0.00	16.79	908.47	985.11	6.66	35.96	50.42	10.20	45.65	7.08	6.77	7.24	39.95	40.40	0.00	
	Max	15.03	545.88	398.17	1019.71	1079.22	7.11	40.44	51.19	14.53	49.06	10.49	7.83	7.68	40.31	40.84	0.00	
7/2/2021	Averages	11.32	1.10	71.43	1049.08	1056.62	6.81	39.67	50.28	10.61	47.19	7.85	6.72	7.40	40.15	40.75	0.44	Normal(ON)
	Min	7.98	0.00	1.01	925.88	979.52	6.60	35.07	49.93	7.26	44.50	7.50	5.25	7.25	39.89	40.62	0.00	
	Max	14.87	463.46	397.43	1096.83	1084.18	7.02	42.85	50.77	15.35	49.75	8.32	7.12	7.58	40.33	40.92	1.00	
7/3/2021	Averages	11.47	2.11	71.89	1054.03	1062.41	6.75	39.13	50.60	11.47	47.33	7.60	6.93	7.38	40.43	41.10	0.17	Normal(ON)
	Min	7.75	0.00	27.34	1020.86	962.74	6.44	35.32	50.14	8.25	44.17	7.44	6.88	7.03	39.56	40.18	0.00	
	Max	15.63	550.62	170.01	1094.87	1113.11	6.97	41.96	50.89	15.43	50.54	7.81	7.01	7.59	40.76	41.48	1.00	
7/4/2021	Averages	15.67	1.19	27.87	782.98	914.89	6.92	45.89	46.32	0.44	38.77	8.04	7.27	7.58	26.80	27.05	0.00	Normal(ON)/Shutdown/Startup
	Min	7.56	0.00	-5.50	532.05	82.41	6.47	29.93	34.69	-39.00	25.46	7.39	6.86	7.03	0.10	0.00	0.00	
	Max	20.37	540.74	152.24	1066.60	1075.37	7.61	75.92	51.17	18.33	47.16	9.43	8.05	8.41	41.01	41.22	0.00	
7/5/2021	Averages	12.41	2.00	53.08	755.17	1019.73	7.13	38.81	50.86	12.05	44.72	8.29	6.96	7.35	35.52	36.08	0.00	Startup/Shutdown/Normal(ON)
	Min	6.94	0.00	-4.40	649.54	861.81	6.17	30.14	39.68	-18.11	27.75	7.68	6.77	7.13	9.64	9.53	0.00	
	Max	20.00	437.13	189.32	968.67	1076.81	7.78	57.92	55.12	18.16	51.67	8.74	7.48	7.87	40.75	40.96	0.00	
7/6/2021	Averages	10.99	3.17	82.81	928.43	1062.53	7.55	41.28	54.91	13.63	51.04	8.36	6.83	7.51	40.57	40.14	0.00	Normal(ON)
	Min	8.95	0.00	25.57	831.93	1032.39	7.35	37.87	54.62	9.97	48.33	7.68	6.04	7.18	40.41	39.99	0.00	
	Max	13.91	708.08	259.85	993.62	1082.11	7.72	44.77	55.18	17.26	53.48	9.18	7.11	7.77	40.73	40.23	0.00	
7/7/2021	Averages	11.83	2.61	77.22	873.94	1046.19	7.11	37.90	54.71	16.81	48.48	8.91	6.85	7.41	40.48	40.11	0.20	Normal(ON)
	Min	5.21	0.00	-0.28	559.21	970.68	6.85	32.86	54.37	12.25	45.40	8.34	6.47	6.69	40.36	39.88	0.00	
	Max	15.51	583.00	282.04	1054.79	1080.87	7.35	42.19	55.08	21.69	52.39	9.56	7.05	7.85	40.69	41.00	1.00	
7/8/2021	Averages	14.50	2.49	48.53	717.79	944.15	6.64	38.38	52.37	14.00	42.93	8.97	7.13	7.54	34.87	35.48	0.12	Normal(ON)/Shutdown/Off/Startup
	Min	8.17	0.00	-9.90	546.16	74.11	6.36	30.74	33.55	-38.63	21.26	7.98	6.82	6.97	0.10	0.00	0.00	
	Max	20.34	578.42	155.61	994.57	1071.70	7.02	75.55	54.60	23.77	50.59	9.89	8.30	8.24	40.41	41.15	1.00	
7/9/2021	Averages	13.83	0.69	37.66	737.66	969.44	6.96	46.97	46.96	-0.01	38.86	8.19	7.19	7.59	27.90	28.10	0.33	Startup/Normal(ON)
	Min	8.19	0.00	-9.90	562.03	799.11	6.77	31.71	30.28	-40.42	19.70	7.45	6.60	6.72	0.07	0.00	0.00	
	Max	20.00	409.91	130.83	1021.83	1070.47	7.39	72.16	57.04	23.33	50.60	9.31	7.98	8.20	40.80	41.47	1.00	
7/10/2021	Averages	11.70	3.26	85.55	1019.59	1050.11	6.73	37.80	54.47	16.68	47.92	8.76	6.78	7.54	40.70	40.95	0.82	Normal(ON)
	Min	7.79	0.00	0.63	831.81	941.33	6.46	34.39	54.32	13.47	45.90	7.91	6.00	7.34	40.50	40.81	0.00	
	Max	15.95	742.50	372.34	1087.49	1109.20	7.01	40.88	54.67	20.14	50.92	10.03	7.05	7.75	40.85	41.10	1.00	
7/11/2021	Averages	11.21	1.82	76.84	989.70	1052.99	6.90	38.37	54.48	16.11	48.99	8.23	7.55	7.55	40.76	40.76	1.00	Normal(ON)
	Min	8.36	0.00	0.47	834.17	972.40	6.58	34.81	54.36	13.19	46.68	7.76	5.99	7.31	40.53	40.59	1.00	
	Max	15.33	610.88	220.96	1059.47	1081.90	7.25	41.29	54.62	19.73	50.46	9.66	10.11	7.77	40.97	40.89	1.00	
7/12/2021	Averages	11.39	0.67	77.87	976.66	1054.13	7.19	40.87	54.54	13.67	49.50	7.42	8.08	7.57	40.79	40.68	1.00	Normal(ON)
	Min	8.22	0.00	0.47	825.57	977.99	7.05	38.30	54.37	11.47	47.40	5.74	6.44	7.17	40.52	40.48	1.00	
	Max	15.09	193.88	245.72	1043.78	1081.16	7.30	43.12	54.79	16.23	50.54	8.29	10.10	8.55	40.97	40.84	1.00	
7/13/2021	Averages	15.82	2.63	31.83	719.33	713.21	7.53	45.38	48.43	3.05	41.33	9.60	8.61	7.76	25.30	25.18	0.57	Normal(ON)/Shutdown/Off
	Min	8.94	0.00	-5.50	278.58	169.33	7.26	38.83	34.05	-14.87	26.19	7.61	7.60	7.11	0.10	0.00	0.00	
	Max	20.41	796.18	163.74	1016.99	1095.00	7.93	57.23	55.06	16.16	51.15	12.24	10.00	8.56	41.15	40.95	1.00	
7/14/2021	Averages	20.25	0.00	0.00	144.23	94.62	8.21	49.62	35.39	-14.23	27.90	10.92	9.70	7.37	0.08	0.00	0.00	Off
	Min	20.07	0.00	0.00	66.09	57.78	7.93	44.68	30.27	-19.91	23.41	10.00	9.28	7.10	0.03	0.00	0.00	
	Max	20.42	0.00	0.00	278.25	169.11	8.58	57.02	46.65	-5.01	32.77	11.77	10.30	7.56	0.10	0.00	0.00	
7/15/2021	Averages	19.77	2.46	2.32	108.25	239.77	8.60	47.79	43.00	-4.80	29.32	9.81	9.95	7.10	0.75	0.64	0.00	Off/Startup
	Min	12.89	0.00	-8.80	45.93	44.44	7.87	35.96	34.25	-21.16	25.44	9.50	9.64	7.10	0.08	0.00	0.00	
	Max	20.40	499.14	51.57	373.47	858.30	8.70	57.88	57.47	20.30	35.14	11.06	10.94	7.10	20.88	20.55	0.00	
7/16/2021	Averages	11.99	6.04	35.50	741.75	1007.68	6.98	37.01	48.82	11.81	43.38	9.10	8.42	7.26	40.82	40.26	0.65	Startup/Normal(ON)
	Min	3.77	0.00	-5.50	374.09	839.39	6.62	33.87	34.55	-2.24	31.00	7.28	7.01	7.00	21.11	20.78	0.00	
	Max	20.00	594.97	113.82	1019.47	1082.78	7.86	41.11	61.93	24.77	46.77	11.44	11.34	7.51	42.09	41.68	1.00	
7/17/2021	Averages	10.98	1.31	75.22	1001.44	1068.11	7.03	40.84	54.56	13.72	47.83	7.63	6.92	7.51	41.10	40.74	1.00	Normal(ON)
	Min	8.80	0.00	3.67	964.27	1001.60	6.94	39.22	54.38	11.32	45.56	7.37	6.86	7.21	40.92	40.60	1.00	
	Max	14.40	433.54	175.01	1069.56	1096.59	7.16	43.20	54.75	15.48	50.16	8.02	7.06	7.66	41.22	40.86	1.00	
7/18/2021	Averages	11.36	2.82	63.87	962.77	1062.48	7.08	38.91	54.63	15.72	47.37	6.74	6.74	7.33	41.09	40.56	1.00	Normal(ON)
	Min	8.73	0.00	21.39	863.44	976.57	6.85	36.80	54.41	13.21	45.55	2.60	4.34	7.06	40.90	40.40	1.00	
	Max	15.11	595.94	182.15	1019.51	1087.96	7.36	41.27	54.94	17.91	49.27	9.54	9.77	7.61	41.41	40.72	1.00	

Stericycle

July 2021 Incineration Averages Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp°C	IDFanTemp	QunchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Operating Mode
7/19/2021	Averages	11.29	1.69	67.90	973.21	1065.56	7.29	39.88	54.61	14.73	49.09	7.14	7.03	7.57	41.08	40.36	1.00	Normal(ON)
	Min	8.73	0.00	20.60	905.16	1018.10	6.81	35.77	54.45	11.06	46.16	4.91	6.33	7.21	40.89	40.05	1.00	
	Max	14.26	553.00	174.21	1015.11	1094.00	7.61	43.49	54.88	18.77	51.47	8.12	7.40	8.37	41.44	40.56	1.00	
7/20/2021	Averages	11.26	1.89	52.62	979.28	1058.25	7.30	41.49	54.67	13.17	48.70	7.41	7.31	7.50	40.85	40.20	1.00	Normal(ON)
	Min	9.49	0.00	13.72	959.83	996.54	7.02	39.03	54.43	10.51	46.84	7.20	7.15	7.04	40.58	40.04	1.00	
	Max	14.17	462.57	215.00	995.54	1097.13	7.58	43.99	54.98	15.75	50.89	7.77	7.67	7.77	40.96	41.28	1.00	
7/21/2021	Averages	11.14	0.25	41.55	963.22	1040.28	6.99	38.49	54.63	16.14	47.11	7.61	7.78	7.42	40.55	41.34	1.00	Normal(ON)/Startup
	Min	8.51	0.00	3.11	953.96	1017.21	6.96	38.32	54.53	15.63	47.02	7.59	7.67	7.25	40.54	41.29	1.00	
	Max	13.80	4.25	95.00	983.08	1061.63	7.02	39.02	54.74	16.42	47.35	7.64	7.81	7.66	40.58	41.37	1.00	
7/22/2021	Averages	11.48	5.42	44.65	737.23	994.94	6.48	41.80	49.62	7.82	40.95	8.25	7.20	7.61	30.88	30.13	0.65	Startup
	Min	0.00	0.00	-3.30	-17.78	-17.78	0.00	-17.78	-17.78	-22.22	-17.78	0.00	0.00	0.00	0.00	0.00	0.00	
	Max	20.00	595.07	196.25	904.01	1078.68	7.70	65.00	54.74	20.05	48.36	9.74	9.10	7.93	42.35	41.46	1.00	
7/23/2021	Averages	11.25	1.60	79.52	873.00	1071.10	6.67	36.36	54.59	18.23	47.97	7.87	6.75	7.63	41.71	40.96	1.00	Startup/Normal(ON)
	Min	9.44	0.00	18.66	786.60	1049.70	6.25	31.96	54.36	15.90	44.70	7.56	6.38	7.26	41.59	40.81	1.00	
	Max	12.52	545.90	163.50	946.13	1110.26	7.02	38.77	54.80	22.57	50.04	8.11	7.21	8.33	41.87	41.19	1.00	
7/24/2021	Averages	11.00	0.80	45.02	892.65	1060.86	7.08	37.02	54.80	17.78	48.69	7.58	6.98	7.50	41.69	40.91	1.00	Normal(ON)
	Min	9.36	0.00	16.06	818.52	967.09	6.61	34.71	53.80	15.29	47.36	7.30	6.43	7.00	41.45	40.64	1.00	
	Max	13.63	286.08	133.53	950.45	1078.28	7.49	39.38	58.89	23.33	50.25	8.28	7.50	8.52	41.96	41.13	1.00	
7/25/2021	Averages	10.79	2.48	38.76	954.59	1059.02	7.25	38.03	54.85	16.82	49.37	7.57	7.30	8.33	41.89	41.30	1.00	Normal(ON)
	Min	8.48	0.00	0.54	906.24	1004.08	6.99	36.53	54.68	15.26	48.37	7.41	7.10	8.14	41.50	40.81	1.00	
	Max	13.45	645.33	333.60	1014.61	1075.01	7.45	39.49	55.00	18.39	50.00	7.68	7.40	8.49	42.32	41.81	1.00	
7/26/2021	Averages	10.89	2.75	62.23	990.08	1061.88	7.03	38.19	54.79	16.60	49.93	7.39	7.07	8.13	42.08	41.27	1.00	Normal(ON)
	Min	7.95	0.00	0.46	962.97	1007.82	6.79	35.26	54.57	13.86	48.46	7.26	6.82	7.99	41.93	41.01	1.00	
	Max	13.21	618.77	186.00	1045.05	1079.76	7.24	40.76	54.99	19.68	51.31	7.95	7.98	8.60	42.24	41.53	1.00	
7/27/2021	Averages	11.98	3.46	89.38	872.92	1060.45	7.03	36.35	54.78	18.44	48.05	7.77	7.16	8.47	42.09	41.19	1.00	Normal(ON)
	Min	0.00	0.00	0.00	-17.78	-17.78	0.00	-17.78	-17.78	0.00	-17.78	0.00	0.00	0.00	0.00	0.00	0.00	
	Max	14.61	746.89	341.31	999.66	1094.80	7.38	40.40	56.32	23.61	50.33	9.03	7.94	8.71	42.43	41.39	1.00	
7/28/2021	Averages	11.10	1.60	78.50	752.30	1062.48	6.98	36.47	54.80	18.33	48.38	7.63	7.37	8.34	41.93	41.00	1.00	Normal(ON)
	Min	7.37	0.00	22.05	433.18	1000.82	6.72	30.59	54.64	15.37	45.34	7.30	7.20	8.07	41.58	40.78	1.00	
	Max	14.81	394.30	187.24	892.70	1115.29	7.23	39.34	54.96	24.27	49.93	7.97	7.65	8.66	42.16	41.34	1.00	
7/29/2021	Averages	11.16	3.43	49.10	898.47	1051.13	7.14	38.94	54.76	15.82	48.86	7.42	7.59	8.00	42.14	40.88	1.00	Normal(ON)
	Min	6.33	0.00	12.91	778.77	948.04	6.73	35.29	54.45	12.71	46.85	7.31	7.37	7.57	41.96	40.58	1.00	
	Max	15.41	808.37	160.26	986.02	1098.60	7.49	41.81	55.07	19.74	50.50	7.52	7.84	8.14	42.39	41.01	1.00	
7/30/2021	Averages	11.67	1.19	38.70	919.91	1051.21	6.45	35.08	54.51	19.43	47.20	7.76	7.33	8.00	41.58	40.38	1.34	Normal(ON)
	Min	8.07	0.00	2.22	738.26	958.04	6.09	31.35	54.32	15.92	45.01	7.30	6.86	7.76	41.17	40.19	1.00	
	Max	15.18	817.82	95.00	1020.76	1135.31	7.12	38.47	54.95	23.25	48.97	8.43	7.75	8.21	42.12	40.58	2.00	
7/31/2021	Averages	11.16	2.41	64.26	977.60	1080.58	6.32	36.68	54.47	17.78	47.55	7.42	7.21	7.89	41.24	40.29	1.70	Normal(ON)
	Min	8.64	0.00	0.78	938.65	1040.39	5.81	28.67	54.35	11.52	43.72	7.35	7.07	7.82	41.08	40.03	1.00	
	Max	13.29	714.85	340.69	1003.92	1182.54	7.03	43.00	54.62	25.79	50.44	7.53	7.32	8.01	41.40	40.48	2.00	

Stericycle

July 2021 Incineration Feed Data

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
7/1/2021	494.6	499.1	504.6	498.0	494.6	497.3	498.4	515.9	381.9	501.6	504.9	517.4	492.0	424.0	503.5	502.2	309.6	349.0	138.0	130.0	504.2	529.4	43.6	153.1	9986.9	
7/2/2021	390.9	501.9	166.2	408.9	536.2	528.6	524.5	499.2	117.1	523.4	492.9	44.8	536.3	504.7	500.5	511.0	502.1	506.3	535.8	557.1	407.4	528.1	152.2	0.0	9976.1	
7/3/2021	510.1	11.8	397.1	555.8	550.0	234.7	118.5	0.0	342.5	328.0	505.6	509.5	504.4	507.0	507.7	547.2	404.2	511.7	336.3	314.4	306.5	322.5	322.2	403.1	9050.8	
7/4/2021	591.8	503.8	163.3	0.0	0.0	635.8	468.9	633.0	325.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3322.2	
7/5/2021	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	253.5	461.9	0.0	202.9	499.6	505.6	503.5	505.9	2932.9	
7/6/2021	498.9	500.5	504.9	503.1	421.0	496.2	433.5	0.0	0.0	0.0	230.5	501.3	504.5	502.6	505.1	501.8	503.2	0.0	503.5	515.8	522.9	551.9	300.9	511.4	9513.5	
7/7/2021	0.0	527.0	331.9	516.5	530.3	558.5	518.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	519.3	543.7	523.9	120.3	519.2	5208.9	
7/8/2021	0.0	57.9	455.1	235.1	89.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	837.3	
7/9/2021	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	228.3	512.8	517.9	234.3	206.4	362.8	403.0	500.8	310.1	3276.4	
7/10/2021	354.9	0.0	113.7	502.1	502.7	428.9	504.4	503.2	510.3	507.9	527.7	501.2	504.4	509.6	508.4	503.5	500.5	317.3	515.3	189.2	377.2	166.0	0.0	356.7	9405.1	
7/11/2021	365.1	41.2	521.0	563.5	541.9	553.0	502.9	504.7	509.2	501.8	512.2	502.6	511.4	510.6	503.2	549.1	502.0	30.6	502.5	515.0	502.9	246.9	0.0	0.0	9993.3	
7/12/2021	541.2	552.3	452.8	523.3	546.6	530.7	375.5	0.0	14.6	408.5	0.0	503.7	510.8	502.2	501.6	500.9	505.2	537.1	508.9	511.5	550.2	308.4	313.2	282.0	9981.2	
7/13/2021	257.4	551.0	336.5	569.8	317.9	534.2	516.4	163.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3246.5	
7/14/2021	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
7/15/2021	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
7/16/2021	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	509.7	93.7	513.3	504.0	0.0	0.0	0.0	0.0	507.1	502.8	534.4	125.2	525.2	270.0	4085.4	210699.6
7/17/2021	501.7	554.1	29.7	535.5	548.9	544.1	0.0	504.9	514.9	512.7	509.0	525.4	493.2	501.9	501.5	500.6	493.3	459.5	136.9	169.6	458.4	421.1	256.0	0.0	9672.9	
7/18/2021	498.7	497.9	413.0	148.5	499.0	496.1	383.4	0.0	189.9	0.0	0.0	0.0	38.2	513.6	514.7	506.2	500.3	503.6	303.8	284.2	360.2	497.7	499.9	497.7	8146.6	
7/19/2021	504.0	164.2	205.3	0.0	472.6	321.2	495.1	461.1	504.2	499.1	314.0	67.2	0.0	0.0	503.7	498.4	508.6	500.7	252.8	492.8	438.6	411.2	378.8	487.4	8481.0	
7/20/2021	475.7	413.4	450.2	452.9	486.4	493.9	514.2	502.1	504.7	500.9	663.7	576.8	499.9	495.4	502.8	539.6	507.5	505.8	400.3	454.0	53.4	0.0	0.0	0.0	9993.6	
7/21/2021	530.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	530.8	
7/22/2021	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
7/23/2021	495.8	493.8	486.7	569.1	505.0	591.7	585.6	462.3	357.0	510.0	498.0	500.8	509.8	487.6	500.2	498.2	497.2	506.0	250.6	457.2	228.6	8.8	0.0	0.0	10000.0	
7/24/2021	408.0	496.3	515.9	444.3	494.0	491.2	509.1	506.6	500.6	504.6	513.3	508.0	501.8	502.5	502.3	504.6	505.1	607.2	508.2	322.9	143.0	3.5	0.0	0.0	9993.0	
7/25/2021	531.8	529.2	535.1	518.8	511.1	311.8	200.4	274.6	423.0	414.0	416.7	507.0	415.1	417.8	434.0	502.0	509.4	445.8	212.4	531.6	546.5	223.0	296.2	289.7	9997.0	
7/26/2021	73.6	436.9	536.3	551.6	544.6	546.4	523.5	354.1	435.1	512.5	502.3	510.0	500.8	503.9	527.4	505.8	517.6	502.7	212.8	457.0	556.2	153.1	30.2	0.0	9994.4	
7/27/2021	542.3	533.2	534.3	401.1	393.9	516.0	514.7	508.2	534.0	499.1	307.2	517.4	173.2	392.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6367.1	
7/28/2021	0.0	0.0	209.8	520.8	501.8	586.1	600.2	504.9	382.6	0.0	0.0	506.2	506.2	414.4	505.1	503.0	501.4	503.1	261.6	401.1	655.7	602.4	615.5	601.7	9883.6	
7/29/2021	505.6	505.6	499.4	515.8	517.3	504.2	429.5	507.0	505.9	187.5	190.5	400.6	497.3	504.8	187.4	0.0	0.0	446.7	263.3	314.8	548.1	78.6	512.1	511.7	9133.7	
7/30/2021	86.6	193.9	0.0	0.0	0.0	0.0	0.0	0.0	97.6	318.4	506.5	513.6	183.2	507.8	528.6	508.7	513.3	514.7	505.2	531.2	542.5	564.4	534.3	542.6	7693.1	
7/31/2021	86.6	446.4	523.3	517.3	412.6	542.5	519.5	501.5	500.4	510.2	325.9	270.5	506.6	501.5	509.5	493.5	513.4	501.6	250.2	496.7	494.4	378.0	194.2	0.0	9996.3	

Stericycle

July 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
7/1/2021 3:19	0	88.1	0	827	779	4.8	0	8.08	0	0	0	0	0	0	0	0	
7/2/2021 0:25	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0.1	0	0.1	
7/2/2021 0:29	88	88.1	0.009999847	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/2/2021 0:33	0	88.1	0	831	779	5.2	0	8.08	0	0	0	0	0	0	0	0	
7/2/2021 0:36	0	88.1	0	0	779	0	8.2	8.08	0.1199999	0	0	0	0	0	0	0	
7/2/2021 7:52	0	88.1	0	0	779	0	0	8.08	0	0	0	-1	-0.1	0.1	0	0.1	
7/2/2021 7:56	62	88.1	2.61	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/2/2021 7:59	0	88.1	0	833	779	5.4	0	8.08	0	0	0	0	0	0	0	0	
7/2/2021 8:03	0	88.1	0	0	779	0	8.1	8.08	0.02000046	0	0	0	0	0	0	0	
7/7/2021 1:19	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0.1	0	0.1	
7/7/2021 1:23	44	88.1	4.41	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/7/2021 1:26	0	88.1	0	830	779	5.1	0	8.08	0	0	0	0	0	0	0	0	
7/7/2021 1:30	0	88.1	0	0	779	0	8.1	8.08	0.02000046	0	0	0	0	0	0	0	
7/7/2021 8:10	0	88.1	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/7/2021 8:24	88	87.5	0.05	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/7/2021 8:29	0	87.5	0	780	779	0.1	0	8.08	0	0	0	0	0	0	0	0	
7/7/2021 8:32	0	87.5	0	0	779	0	8.1	8.08	0.02000046	0	0	0	0	0	0	0	
7/8/2021 1:20	0	87.5	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/8/2021 1:24	89	87.5	0.15	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/8/2021 1:28	0	87.5	0	782	779	0.3	0	8.08	0	0	0	0	0	0	0	0	
7/8/2021 1:32	0	87.5	0	0	779	0	8.1	8.08	0.02000046	0	0	0	0	0	0	0	
7/10/2021 15:10	0	87.5	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/10/2021 15:14	90	87.5	0.25	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/10/2021 15:18	0	87.5	0	784	779	0.5	0	8.08	0	0	0	0	0	0	0	0	
7/10/2021 15:21	0	87.5	0	0	779	0	8.2	8.08	0.1199999	0	0	0	0	0	0	0	
7/11/2021 1:42	0	87.5	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/11/2021 1:46	82	87.5	0.55	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/11/2021 1:49	0	87.5	0	776	779	0.3	0	8.08	0	0	0	0	0	0	0	0	
7/11/2021 1:53	0	87.5	0	0	779	0	8.2	8.08	0.1199999	0	0	0	0	0	0	0	
7/12/2021 0:24	0	87.5	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/12/2021 0:28	75	87.5	1.25	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/12/2021 0:33	0	87.5	0	781	779	0.2	0	8.08	0	0	0	0	0	0	0	0	
7/12/2021 0:36	0	87.5	0	0	779	0	8.2	8.08	0.1199999	0	0	0	0	0	0	0	
7/13/2021 1:18	0	87.5	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/13/2021 1:21	73	87.5	1.45	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/13/2021 1:26	0	87.5	0	779	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/13/2021 1:29	0	87.5	0	0	779	0	8.2	8.08	0.1199999	0	0	0	0	0	0	0	
7/17/2021 0:36	0	87.5	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/17/2021 0:41	73	87.5	1.45	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/17/2021 0:45	0	87.5	0	778	779	0.1	0	8.08	0	0	0	0	0	0	0	0	
7/17/2021 0:48	0	87.5	0	0	779	0	8.2	8.08	0.1199999	0	0	0	0	0	0	0	
7/21/2021 0:13	0	87.5	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/21/2021 0:16	76	87.5	1.15	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
7/21/2021 0:21	0	87.5	0	780	779	0.1	0	8.08	0	0	0	0	0	0	0	0	
7/21/2021 0:24	0	87.5	0	0	779	0	8.2	8.08	0.1199999	0	0	0	0	0	0	0	
7/31/2021 22:27	0	91.3	0	0	764	0	8.1	8.01	0.09000015	0	0	0	0	0	0	0	
7/31/2021 22:30	0	91.3	0	697	764	6.7	0	8.01	0	0	0	0	0	0	0	0	
7/31/2021 22:33	45	91.3	4.63	0	764	0	0	8.01	0	0	0	0	0	0	0	0	

O2 6 minute average < 7.5

O2 < 7.5

	Start	Stop		Op.	Stack		Actions
Date	Time	Time	Duration	Mode	O2 %	Explanation	Taken
7/5/2021	7:10	7:14	0:04	Normal	7.2	Minor CO fulctuations caused a monentary drop in the O2 levels.	No waste was fed until O2 levels returned to the normal operating range.
7/7/2021	7:56	8:02	0:06	Normal	6.2	Minor CO fulctuations caused a monentary drop in the O2 levels.	No waste was fed until O2 levels returned to the normal operating range.
7/7/2021	8:14	8:16	0:02	Normal	7.4	Minor CO fulctuations caused a monentary drop in the O2 levels.	No waste was fed until O2 levels returned to the normal operating range.

Carbon Monoxide > 8ppm 4 hour alarm

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Carbon Monoxide > 8ppm 4 hour alarm

Date	Start Time	Stop Time	Duration	Op. Mode	Stack CO @ 11% O2	Stack CO as mg/m^3	Explanation	Actions Taken
7/6/2021	6:44	10:00	3:16	Normal	10.7	12.3	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
7/7/2021	8:30	11:00	2:30	Normal	9.1	10.5	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
7/8/2021	3:15	7:00	3:45	Normal	9.9	11.4	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.
7/13/2021	2:24	5:00	2:36	Normal	9.5	11.0	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
7/18/2021	18:36	20:00	1:24	Normal	9.3	10.7	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
7/25/2021	3:00	6:00	3:00	Normal	9.6	11.1	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
7/27/2021	2:00	3:00	1:00	Normal	9.8	11.3	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.
7/27/2021	14:37	18:00	3:23	Normal	8.9	10.3	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
7/29/2021	23:17	1:00	1:43	Normal	8.9	10.3	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
7/30/2021	1:35	6:00	4:25	Normal	9.3	10.7	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.

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Secondary Chamber Temperature < 1000°C

Date	Start Time	Stop Time	Duration	Op. Mode	Temp. °C	Explanation	Actions Taken
7/4/2021	3:54	5:15	1:21	Normal	958	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up
7/4/2021	6:30	8:00	1:30	Normal	963	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up
7/4/2021	8:55	9:34	0:39	Normal	993	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up
7/5/2021	6:35	7:15	0:40	Shut-down	988	Low upper chamber temperatre caused by high flame-port air setting during shut-down process.	Incinerator had just come out of shut-down and was in the process of start-up when operational issues were encountered. No waste had been fed into the incinerator for the pervious 12 hours. The flame-port air setting was adjusted.
7/5/2021	7:19	8:11	0:52	Shut-down	989	Low upper chamber temperatre caused by high flame-port air setting during shut-down process.	Incinerator had just come out of shut-down and was in the process of start-up when operational issues were encountered. No waste had been fed into the incinerator for the pervious 12 hours. The flame-port air setting was adjusted.

7/8/2021	4:05	4:39	0:34	Normal	992	Low upper chamber temperatre caused by high flame-port air setting while the incinerator was idle.	Flame-port air setting was adjusted. No waste was fed until the temperature returned to the norma operating range.
7/8/2021	14:50	18:13	3:23	Shut-down	953	Low upper chamber temperatre caused by high flame-port air setting during shut-down process.	The incinerator was brought to a controlled shut-down.
7/13/2021	12:36	13:15	0:39	Normal	990	Low upper chamber temperatre caused by high flame-port air setting during shut-down process.	The incinerator was brought to a controlled shut-down.
7/16/2021	13:15	14:14	0:59	Normal	958	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up
7/18/2021	7:44	8:14	0:30	Normal	986	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up
7/29/2021	16:10	17:37	1:27	Normal	974	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up
7/30/2021	9:05	9:35	0:30	Normal	976	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up

Quench pH out of Range (<6.4pH / >10.4pH)

Quench pH out of Range (<6.4pH / >10.4pH)

	Start	Stop		Op.	Quench		Action
Date	Time	Time	Duration	Mode	pH	Explanation	Taken
7/18/2021	7:06	12:42	5:36	Normal	4.14	Quench Pump breakdown.	Maintenance performed necessary repairs.
7/19/2021	10:33	13:45	3:12	Normal	5.39	Caustic supply pump lost its prime.	Maintenance primed the caustic supply pump.

Condenser pH out of range (<6.4pH / >10.4pH)

Condenser pH out of range (<6.4pH / >10.4pH)

	Start	Stop		Op.	Condenser		Action
Date	Time	Time	Duration	Mode	pH	Explanation	Taken
7/2/2021	10:22	13:34	3:12	Normal	5.68	Condenser PH dropped due to pump break down	Maintenance performed the necessary repairs
7/18/2021	7:48	12:56	5:08	Normal	5.23	Condenser PH dropped due to pump break down	Maintenance performed the necessary repairs

Differential from Demister < 10 C

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Differential from Demister < 10°C

Date	Start Time	Stop Time	Duration	Op. Mode	Differential Temp Outlet °C	Explanation	Actions Taken
7/2/2021	5:44	9:25	3:41	Normal	9.6	High Ambient temperatures caused the Demister temperature to rise	Operator waited until the Demister temperature reduced to its normal values
7/2/2021	15:08	19:09	4:01	Normal	7.9	High Ambient temperatures caused the Demister temperature to rise	Operator waited until the Demister temperature reduced to its normal values
7/16/2021	12:24	16:10	3:46	Normal	7.3	High Ambient temperatures caused the Demister temperature to rise	Operator waited until the Demister temperature reduced to its normal values

Stericycle

August 2021 Incineration Averages Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp°C	IDFanTemp°C	QunchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Comments
8/1/2021	Average	11.188	2	64	923	1068	7	38	55	16	47	7	7	8	40	38	1	Normal(ON)
	Min	8.07	0	20	855	1003	7	33	51	11	44	7	7	8	31	30	1	
	Max	14.27	568	172	1068	1130	7	44	55	22	50	8	8	8	43	42	2	
8/2/2021	Average	11	1	60	973	1075	7	39	55	16	47	7	7	8	40	41	2	Normal(ON)
	Min	9	0	17	888	1011	6	36	54	12	44	7	7	7	31	31	1	
	Max	14	565	122	1023	1167	7	43	55	19	49	7	8	8	41	41	2	
8/3/2021	Average	11	3	60	954	1076	7	40	55	14	47	7	7	8	40	41	2	Normal(ON)
	Min	9	0	17	869	1023	6	35	54	9	43	7	6	8	40	41	1	
	Max	14	575	123	1001	1128	7	45	55	20	50	8	8	8	40	41	2	
8/4/2021	Average	14	3	38	903	962	7	41	54	14	44	7	8	8	22	34	1	Normal(ON)/Shutdown/Off/Startup/Normal(ON)
	Min	0	0	-7	-18	-18	0	-18	-18	-10	-18	0	0	0	0	0	0	
	Max	20	766	172	1022	1128	7	64	56	27	50	8	8	8	40	42	2	
8/5/2021	Average	12	1	63	907	1066	7	40	55	14	47	7	7	8	0	42	2	Normal(ON)
	Min	8	0	0	749	1014	6	34	54	10	44	7	7	8	0	41	1	
	Max	13	452	331	1037	1103	7	45	55	21	50	8	8	8	0	44	2	
8/6/2021	Average	12	1	88	883	1078	7	43	55	12	48	7	7	8	0	44	2	Startup/Normal(ON)
	Min	9	0	21	765	1052	7	38	54	9	45	7	7	8	0	43	1	
	Max	13	452	331	1037	1161	7	46	55	21	51	8	8	8	0	44	2	
8/7/2021	Average	12	1	70	903	1072	7	43	55	11	49	7	7	8	0	43	2	Normal(ON)
	Min	8	0	19	819	1017	7	40	54	8	46	7	7	8	0	43	1	
	Max	13	549	339	977	1151	7	47	55	15	51	8	8	8	0	44	2	
8/8/2021	Average	15	1	24	762	774	8	42	44	2	41	7	8	8	0	31	1	Normal(ON)/Shutdown/Off
	Min	10	0	0	287	70	7	30	31	-31	29	7	7	8	0	0	0	
	Max	20	860	103	1007	1070	8	72	55	12	50	8	9	8	0	43	2	
8/9/2021	Average	20	0	0	135	53	8	63	52	-12	28	8	9	8	0	0	0	Off
	Min	0	0	0	-18	-18	0	-18	-18	-28	-18	0	0	0	0	0	0	
	Max	20	0	0	286	70	8	72	57	0	30	8	9	8	0	0	0	
8/10/2021	Average	19	0	0	41	36	8	36	31	-5	25	7	8	8	0	0	0	Off
	Min	0	0	-8	-18	-18	0	-18	-18	-12	-18	0	0	0	0	0	0	
	Max	20	0	0	48	43	9	43	39	2	30	8	9	8	0	0	0	
8/11/2021	Average	20	0	5	40	38	9	39	41	2	30	8	9	8	0	0	0	Off
	Min	0	0	0	-18	-18	0	-18	-18	0	-18	0	0	0	0	0	0	
	Max	20	0	95	45	39	9	41	45	5	33	8	9	8	0	0	0	
8/12/2021	Average	20	0	0	36	35	8	41	37	-4	30	8	9	8	0	0	0	Off
	Min	20	0	0	35	34	8	38	36	-10	29	8	8	7	0	0	0	
	Max	20	0	0	38	36	9	46	40	2	32	8	9	8	0	0	0	
8/13/2021	Average	20	0	0	34	35	9	36	42	6	33	8	8	7	0	0	0	Off
	Min	20	0	0	33	33	9	29	36	-10	30	8	8	7	0	0	0	
	Max	20	0	0	36	36	9	46	47	14	36	8	8	7	0	0	0	
8/14/2021	Average	20	2	11	113	391	8	31	35	4	30	8	8	7	5	3	0	Off/Startup
	Min	16	0	0	30	30	6	26	31	-11	27	7	7	7	0	0	0	
	Max	20	74	105	421	983	9	43	53	21	37	8	8	8	41	41	0	
8/15/2021	Average	17	11	66	668	1036	6	35	54	20	43	7	7	8	29	40	0	Startup/Normal(ON)
	Min	10	0	0	421	888	6	31	53	15	37	7	7	7	0	35	0	
	Max	19	1310	213	834	1113	7	39	55	24	48	7	7	8	41	41	1	
8/16/2021	Average	16	3	34	829	1029	7	40	53	14	45	7	7	8	11	33	0	Startup/Shutdown/Off/Startup/Normal(On)
	Min	9	0	0	623	816	6	37	43	5	33	7	7	7	0	0	0	
	Max	20	665	166	948	1106	7	46	56	18	52	8	9	8	42	43	0	
8/17/2021	Average	12	3	64	862	1057	7	41	55	13	51	7	7	8	41	42	0	Normal(ON)
	Min	10	0	0	680	931	7	37	53	9	49	7	7	7	41	42	0	
	Max	17	564	204	985	1114	8	46	55	18	53	7	8	8	42	43	0	
8/18/2021	Average	12	2	66	930	1067	8	41	55	14	51	7	7	8	42	42	0	Normal(ON)
	Min	8	0	0	856	1010	7	37	54	9	49	7	5	7	41	42	0	
	Max	13	521	380	1016	1101	8	45	58	18	52	8	8	8	43	43	0	

Stericycle

August 2021 Incineration Averages Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp°C	IDFanTemp°C	QunchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Comments
8/19/2021	Average	12	3	68	972	1070	7	41	55	14	50	7	8	7	43	43	0	Normal(ON)
	Min	10	0	20	947	1012	7	36	54	10	49	7	7	7	42	43	0	
	Max	16	647	144	993	1094	8	44	55	19	51	8	9	7	43	43	0	
8/20/2021	Average	13	3	55	874	1061	7	37	53	16	48	8	7	7	42	43	0	Normal(ON)
	Min	10	0	20	619	991	7	32	40	6	40	7	6	7	40	42	0	
	Max	14	538	227	980	1129	8	43	55	23	51	9	8	7	43	43	0	
8/21/2021	Average	12	4	59	967	1064	8	40	55	15	50	8	8	7	43	43	0	Normal(ON)
	Min	10	0	20	943	990	7	36	55	12	49	7	5	7	42	42	0	
	Max	15	710	124	1001	1132	8	43	55	19	51	9	10	7	44	43	0	
8/22/2021	Average	12	3	49	866	1063	7	37	55	17	49	7	7	7	29	42	0	Normal(ON)/Shutdown /Normal(ON)
	Min	10	0	0	616	992	7	33	54	12	47	7	7	6	0	41	0	
	Max	16	655	131	985	1176	8	43	55	22	52	8	8	7	43	43	0	
8/23/2021	Average	13	4	66	906	1055	8	39	55	16	50	8	8	7	41	42	0	Normal(ON)
	Min	9	0	-3	659	996	7	36	55	11	49	7	5	6	39	41	0	
	Max	20	804	247	985	1140	8	44	55	19	51	9	10	7	42	43	0	
8/24/2021	Average	12	2	53	881	1059	7	41	55	14	50	7	7	7	41	41	0	Normal(ON)
	Min	10	0	13	604	996	7	37	55	9	49	7	7	7	40	41	0	
	Max	15	672	223	993	1101	8	46	55	18	52	8	8	7	42	42	0	
8/25/2021	Average	13	1	53	964	1059	8	41	55	14	50	7	7	7	41	41	0	Normal(ON)
	Min	10	0	18	912	982	7	37	55	9	49	7	7	7	41	41	0	
	Max	15	202	196	998	1097	8	46	55	18	52	7	8	7	42	41	0	
8/26/2021	Average	13	2	69	978	1056	8	42	55	13	50	7	7	7	41	41	0	Normal(ON)
	Min	9	0	34	947	987	7	37	54	10	49	7	7	7	40	40	0	
	Max	16	741	205	1007	1087	8	44	55	18	51	7	8	7	41	41	0	
8/27/2021	Average	13	2	83	961	1065	7	37	55	18	48	7	7	7	40	41	0	Normal(ON)
	Min	10	0	2	897	1011	7	32	55	13	47	7	7	7	40	40	0	
	Max	17	636	235	1014	1093	7	42	55	23	50	7	7	7	41	41	0	
8/28/2021	Average	14	3	68	954	1060	7	39	55	16	49	7	7	7	40	40	0	Normal(ON)
	Min	11	0	2	867	1023	7	35	54	9	48	7	7	7	40	40	0	
	Max	16	921	189	994	1088	8	46	55	20	52	7	8	7	40	41	0	
8/29/2021	Average	16	3	50	714	1032	8	41	55	14	49	7	8	7	40	40	0	Normal(ON)
	Min	12	0	28	526	960	7	35	54	11	48	7	8	7	40	40	0	
	Max	19	1675	227	919	1073	8	44	55	20	51	7	8	7	40	40	0	
8/30/2021	Average	14	4	62	874	1048	7	41	55	14	49	7	7	7	41	41	0	Normal(ON)
	Min	9	0	0	651	960	7	37	54	10	48	7	7	7	40	40	0	
	Max	18	970	187	992	1116	8	45	55	18	50	8	8	7	42	42	0	
8/30/2021	Average	17	0	21	559	725	7	42	46	4	39	9	9	7	25	25	0	Normal(ON)/Shutdown /Off/Startup
	Min	12	0	0	295	136	7	32	27	-25	21	8	7	7	0	0	0	
	Max	20	273	95	953	1063	8	58	55	23	48	12	11	7	42	42	0	

Stericycle

August 2021 Incineration Feed Data

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
8/1/2021	534.0	500.1	506.2	512.5	502.2	492.2	0.0	348.2	0.0	520.3	419.8	471.8	0.0	0.0	0.0	512.0	503.9	509.2	485.7	403.8	498.4	504.2	492.9	497.6	9215.0	
8/2/2021	498.4	151.3	444.3	468.1	427.0	480.2	474.3	407.7	500.5	496.9	499.8	498.4	307.5	514.1	502.8	501.8	500.2	495.6	258.6	340.2	323.6	233.4	374.8	300.5	10000.0	
8/3/2021	451.0	423.0	357.4	492.9	493.5	567.4	516.2	292.2	508.1	519.8	512.0	504.4	494.3	0.0	0.0	503.6	164.8	550.5	0.0	618.7	597.3	628.9	608.7	195.3	10000.0	
8/4/2021	0.0	507.8	529.0	500.9	510.7	510.4	505.2	513.8	513.6	542.6	542.3	527.6	87.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	246.8	6038.6	
8/5/2021	516.5	502.2	506.1	502.2	502.4	504.2	505.8	443.4	505.3	499.5	505.1	495.3	502.2	502.1	498.2	495.0	500.0	489.6	249.4	506.5	259.8	0.0	0.0	0.0	9990.8	
8/6/2021	620.5	552.6	362.2	394.7	503.5	387.2	355.1	471.7	405.1	553.5	504.4	469.5	524.4	498.2	486.1	495.9	502.8	498.4	260.6	461.9	315.8	374.8	1.1	0.0	10000.0	
8/7/2021	506.3	511.6	483.7	0.0	601.2	622.0	352.0	0.0	533.4	527.3	409.5	540.7	526.0	0.0	540.7	404.9	506.6	545.2	505.6	521.4	498.9	458.9	404.1	0.0	10000.0	
8/8/2021	595.2	508.0	465.8	307.2	564.8	504.1	503.2	304.5	498.2	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4256.9	
8/9/2021	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10-Aug-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11-Aug-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
12-Aug-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
13-Aug-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14-Aug-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
15-Aug-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	74.8	165.8	446.7	502.4	501.0	504.6	500.8	295.5	63.1	501.8	552.4	511.9	515.7	5136.5	
16-Aug-21	505.8	508.7	506.1	505.8	503.4	509.6	503.9	523.9	35.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	509.5	514.6	513.3	504.8	107.7	6253.0	**185616.9**
17-Aug-21	499.1	518.5	515.8	0.0	0.0	231.8	513.2	512.3	472.7	528.9	524.8	401.7	0.0	140.7	0.0	524.0	486.2	242.5	323.0	151.3	495.9	0.0	494.9	510.7	8088.0	
18-Aug-21	500.5	44.5	274.4	379.4	0.0	499.1	435.5	175.4	282.4	521.8	445.1	0.0	532.2	504.3	239.5	530.6	503.2	0.0	151.1	93.9	395.6	105.9	313.3	367.8	7295.5	
19-Aug-21	518.9	462.9	0.0	522.9	0.0	565.9	275.7	499.6	508.4	496.7	495.9	464.0	492.1	492.1	490.4	499.6	505.7	503.7	111.1	505.9	509.0	509.1	513.6	54.5	9997.7	
20-Aug-21	503.8	507.1	573.8	0.0	0.0	0.0	0.0	0.0	0.0	294.0	483.8	494.2	638.2	509.0	492.6	504.9	498.7	500.6	254.8	505.8	518.2	509.2	407.9	417.2	8613.8	
21-Aug-21	435.0	403.8	277.5	625.0	611.3	607.2	527.4	523.1	553.1	265.7	544.9	531.4	503.6	218.4	200.3	548.8	466.6	559.1	136.4	139.5	504.2	509.0	308.7	0.0	10000.0	
22-Aug-21	506.5	528.2	568.3	0.0	0.0	0.0	0.0	0.0	0.0	115.1	531.3	559.2	327.7	264.4	142.1	527.2	542.1	160.5	400.4	209.0	506.0	475.1	509.2	555.9	7428.2	
23-Aug-21	625.9	519.3	0.0	0.0	9.8	0.0	516.5	0.0	532.4	520.7	478.2	401.0	501.1	513.9	97.9	8.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4725.3	
24-Aug-21	0.0	0.0	250.2	649.3	119.4	666.6	411.6	293.4	155.6	502.0	480.7	502.3	497.1	387.9	329.8	136.1	502.8	503.2	267.5	0.0	58.0	501.9	163.6	104.4	7483.4	
25-Aug-21	354.7	505.0	273.9	0.0	502.6	535.0	517.8	516.0	250.6	445.9	501.8	493.7	195.0	0.0	493.4	495.7	498.6	393.0	0.0	504.8	512.3	0.0	0.0	419.5	8409.3	
26-Aug-21	501.2	390.9	502.2	509.6	215.0	501.8	500.0	472.0	439.9	290.1	456.8	383.8	15.6	0.0	238.7	588.4	99.2	175.1	321.4	498.9	400.8	0.0	1.1	0.0	7502.5	
27-Aug-21	502.3	610.1	479.1	464.4	182.0	505.4	620.1	482.1	463.2	514.3	364.5	347.9	495.3	570.9	298.5	544.4	568.4	506.6	19.8	0.0	0.0	0.0	331.6	187.0	9057.9	
28-Aug-21	0.0	0.0	505.8	670.0	502.6	372.0	524.6	348.7	91.6	0.0	314.8	501.6	502.8	521.3	542.7	0.0	0.0	0.0	333.1	501.6	504.0	0.0	0.0	0.0	6737.2	
29-Aug-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	457.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	506.4	0.0	0.0	0.0	0.0	963.6	
30-Aug-21	0.0	0.0	135.4	334.6	509.6	504.0	667.0	482.6	498.8	611.3	499.4	467.4	491.3	488.2	501.2	456.8	485.7	493.0	79.1	505.8	0.0	212.5	0.0	0.0	8423.7	
31-Aug-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Stericycle

August 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
8/4/2021 1:13	0	91.3	0	0	764	0	0	8.01	0	0	0	0	0	0	0	0	
8/4/2021 1:17	49	91.3	4.23	0	764	0	0	8.01	0	0	0	0	0	0	0	0	
8/4/2021 1:21	0	91.3	0	686	764	7.8	0	8.01	0	0	0	0	0	0	0	0	
8/4/2021 1:24	0	91.3	0	0	764	0	8.2	8.01	0.1899996	0	0	0	0	0	0	0	
8/5/2021 23:36	0	91.3	0	0	764	0	0	8.01	0	0	0	0	0	0.1	0	0.1	
8/5/2021 23:41	0	91.3	0	0	764	0	8.2	8.01	0.1899996	0	0	0	0	0	0	0	
8/5/2021 23:45	0	91.3	0	691	764	7.3	0	8.01	0	0	0	0	0	0	0	0	
8/7/2021 23:45	0	91.3	0	0	764	0	0	8.01	0	0	0	0	0	0	0	0	
8/7/2021 23:48	0	91.3	0	0	764	0	8.2	8.01	0.1899996	0	0	0	0	0	0	0	
8/7/2021 23:52	0	91.3	0	712	764	5.2	0	8.01	0	0	0	0	0	0	0	0	
8/23/2021 19:36	0	87.5	0	790	779	1.1	0	8.08	0	0	0	0	0	0	0	0	
8/23/2021 19:40	0	87.5	0	0	779	0	8.1	8.08	0.02000046	0	0	0	0	0	0	0	
8/27/2021 0:23	0	87.5	0	0	779	0	0	8.08	0	0	0	28	2.8	12.1	0	12.1	
8/27/2021 0:27	90	87.5	0.25	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
8/27/2021 0:30	0	87.5	0	876	779	9.7	0	8.08	0	0	0	0	0	0	0	0	
8/27/2021 0:34	0	87.5	0	0	779	0	8.6	8.08	0.5200005	0	0	0	0	0	0	0	
8/28/2021 1:58	0	87.5	0	0	779	0	0	8.08	0	0	0	30	3	15.9	0	15.9	
8/28/2021 2:02	89	87.5	0.15	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
8/28/2021 2:05	0	87.5	0	889	779	11	0	8.08	0	0	0	0	0	0	0	0	
8/28/2021 2:09	0	87.5	0	0	779	0	9.7	8.08	1.62	0	0	0	0	0	0	0	
8/31/2021 18:07	0	87.5	0	0	779	0	0	8.08	0	0	0	-1	-0.1	0	0	0	
8/31/2021 18:12	88	87.5	0.05	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
8/31/2021 18:15	0	87.5	0	0	779	0	8.2	8.08	0.1199999	0	0	0	0	0	0	0	
8/31/2021 18:19	0	87.5	0	782	779	0.3	0	8.08	0	0	0	0	0	0	0	0	

Carbon Monoxide > 8ppm 4 hour alarm

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Carbon Monoxide > 8ppm 4 hour alarm

Date	Start Time	Stop Time	Duration	Op. Mode	Stack CO @ 11% O2	Stack CO as mg/m^3	Explanation	Actions Taken
8/4/2021	14:00	16:00	2:00	Shut-down	9.7	11.2	High CO levels occurred during a controlled shut-down	No waste was fed during this period. The incinerator was brought to a controlled shut-down.
8/22/2021	22:00	1:00	3:00	Normal	8.1	9.3	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
8/23/2021	13:00	16:00	3:00	Normal	10.3	11.9	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
8/28/2021	15:00	19:00	4:00	Normal	11.5	13.3	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
8/29/2021	8:00	11:00	3:00	Normal	15.2	17.5	CO spikes caused by low upper chamber temperature due the incinerator sitting idle.	Operator changed the FPA and brought the temperature back up
8/30/2021	20:00	22:00	2:00	Normal	12.4	14.3	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.

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Secondary Chamber Temperature < 1000°C

Date	Start Time	Stop Time	Duration	Op. Mode	Temp. °C	Explanation	Actions Taken
8/17/2021	5:21	5:50	0:29	Normal	969	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up
8/24/2021	0:45	1:23	0:38	Normal	998	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up
8/25/2021	2:48	3:49	1:01	Normal	991	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up
8/29/2021	6:17	7:46	1:29	Normal	987	Machine sat idle during shift change	Operator changed the FPA and brought the temperature back up
8/30/2021	22:51	23:40	0:49	Normal	984	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up

Condenser pH out of range (<6.4pH / >10.4pH)

Condenser pH out of range (<6.4pH / >10.4pH)

Date	Start Time	Stop Time	Duration	Op. Mode	Condenser pH	Explanation	Action Taken
8/23/2021	5:10	8:44	3:34	Normal	5.57	Ph probe failed and Caustic pump malfunction	Maintenance performed the necessary repairs and replaced Ph probe

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Atomizer Amps < 36

	Start	Stop		Op.	Atom. A	Atom. B		Action
Date	Time	Time	Duration	Mode	amps	amps	Explanation	Taken
8/1/2021	11:57:00	15:03:00	3:06:00	Normal	40.9	31.7	Low amerag in Atomizer B was caused by a clogged pot filter	Stericycle maintenance shut-down the atomizer and the incinerator ran on 1 rotarty atomizer until the pot filter was cleaned.
8/4/2021	12:12:00	15:26:00	3:14:00	Shut-Down	13.1	40.5	Stericycle maintenance detected a mechanical vibration in Atomizer A.	The incinerator & APC system were brought to a contolled shut-down & atomizer A was taken offline for repair.
8/22/2021	2:35:00	12:15:00	9:40:00	Normal	9.6	41.7	Loose fitting in gear oil connection. Water entered into the gear oil tank.	Stericycle maintenance shut-down the atomizer and the incinerator ran on 1 rotarty atomizer until the oil line was repaired and the atoizer was restarted.

Differential from Demister < 10 C

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Differential from Demister < 10°C

	Start	Stop		Op.	Differential Temp		Actions
Date	Time	Time	Duration	Mode	Outlet °C	Explanation	Taken
8/8/2021	8:52	15:39	6:47	Normal	3	Low differential tempature was a reuslt of the system going into a controlled shut-down	The incinerator was brought to a controlled shut-down. No waste was fed at this time.

Stericycle

September 2021 Incineration Averages Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp	IDFanTemp°C	QunchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	OpMode
9/1/2021	Average	20.2	0.0	0.9	135.7	77.3	7.8	32.6	28.2	-4.4	22.6	12.2	11.7	4.1	0.1	0.0	0.0	Off
	Min	11.5	0.0	0.0	56.3	48.9	7.8	23.9	23.4	-25.2	18.0	12.1	11.0	0.0	0.1	0.0	0.0	
	Max	20.4	0.0	95.0	294.6	135.7	7.9	55.0	47.4	8.7	31.4	12.3	12.0	7.1	0.1	0.0	0.0	
9/2/2021	Average	20.3	0.0	0.0	41.5	39.6	7.7	49.5	38.7	-10.7	23.6	12.3	12.1	0.0	0.1	0.0	0.0	Off
	Min	20.1	0.0	0.0	34.4	33.9	7.6	41.6	29.0	-26.6	18.2	12.2	12.0	0.0	0.0	0.0	0.0	
	Max	20.4	0.0	0.0	56.3	49.6	7.8	58.3	46.2	4.7	30.9	12.3	12.1	0.0	0.1	0.0	0.0	
9/3/2021	Average	17.8	1.5	12.1	144.2	352.4	7.2	47.6	39.9	-7.7	26.6	11.3	10.8	1.6	10.0	9.7	0.0	Off/Start-up
	Min	11.6	0.0	-2.2	31.3	31.8	6.2	30.3	31.6	-24.7	18.3	8.7	7.1	0.0	0.0	0.0	0.0	
	Max	20.4	501.3	44.9	533.5	1053.2	7.6	57.1	54.5	24.1	45.9	12.2	12.1	6.9	42.5	41.8	0.0	
9/4/2021	Average	12.6	1.6	49.4	732.0	1034.5	6.7	35.6	53.9	18.4	47.8	7.8	7.0	7.0	42.4	41.2	0.0	Start-up/Normal(ON)
	Min	9.0	0.0	0.0	533.9	591.7	6.3	28.3	43.0	3.6	44.4	7.1	5.0	6.9	42.1	40.8	0.0	
	Max	20.4	462.0	135.4	949.3	1105.0	7.1	42.1	54.6	26.1	50.7	8.9	8.0	7.0	42.6	41.5	0.0	
9/5/2021	Average	12.1	1.8	67.1	970.1	1066.8	7.0	40.5	54.6	14.0	48.9	7.2	7.9	6.9	42.3	40.9	0.0	Normal(ON)
	Min	9.0	0.0	25.6	928.0	996.0	6.8	36.9	54.4	10.5	48.0	7.0	7.4	6.7	42.2	40.8	0.0	
	Max	14.2	587.8	138.2	994.8	1127.6	7.2	44.0	54.7	17.8	49.5	7.5	8.4	7.0	42.4	41.0	0.0	
9/6/2021	Average	12.5	1.4	41.7	905.2	1056.3	6.6	37.5	54.6	17.0	47.4	7.5	8.7	7.0	42.1	40.8	0.0	Normal(ON)
	Min	9.9	0.0	1.5	727.4	1013.9	6.4	33.8	54.5	11.5	45.7	7.3	8.4	6.8	41.6	40.6	0.0	
	Max	15.6	583.1	119.7	1016.4	1102.5	6.9	43.1	54.8	20.9	49.0	7.9	9.0	7.0	42.4	41.0	0.0	
9/7/2021	Average	12.5	1.0	61.5	960.2	1065.7	6.7	40.0	54.5	14.5	48.1	7.3	7.9	7.0	41.7	40.5	0.0	Normal(ON)
	Min	8.7	0.0	-0.1	925.9	994.3	6.3	35.0	54.4	10.1	46.6	7.2	7.2	7.0	41.5	40.4	0.0	
	Max	15.1	215.7	137.1	1019.4	1109.8	7.2	44.4	54.8	19.6	49.8	7.4	9.0	7.0	41.8	40.7	0.0	
9/8/2021	Average	13.9	0.8	32.2	864.0	1024.4	7.0	40.5	50.3	9.8	43.4	7.8	7.7	7.0	34.7	34.9	0.0	Normal(ON)/Shutdown/Startup/Normal(ON)
	Min	10.3	0.0	0.0	712.7	740.7	6.7	30.9	33.7	-21.4	25.7	7.2	7.4	7.0	0.1	0.0	0.0	
	Max	20.4	332.7	113.7	968.5	1084.3	7.9	56.1	54.9	19.4	48.7	10.1	8.3	7.0	41.9	42.9	0.0	
9/9/2021	Average	12.2	1.6	50.1	976.2	1061.7	6.6	36.8	54.6	17.8	47.1	7.2	7.5	7.0	41.4	42.2	0.0	Normal(ON)/Shutdown/Startup/Normal(ON)
	Min	9.7	0.0	14.5	948.0	994.5	6.3	30.2	54.4	13.2	45.7	7.2	7.4	7.0	40.4	42.0	0.0	
	Max	15.1	429.6	172.5	993.8	1090.8	6.8	41.5	54.8	24.3	48.2	7.3	7.7	7.0	42.5	42.3	0.0	
9/10/2021	Average	12.5	4.7	49.5	965.4	1059.5	6.4	33.3	54.5	21.2	46.9	7.3	7.5	7.0	42.3	41.9	0.0	Normal(ON)
	Min	9.0	0.0	1.1	897.5	1002.1	6.0	27.8	50.6	14.0	44.9	7.2	7.3	7.0	41.9	41.5	0.0	
	Max	15.3	809.3	407.6	992.3	1099.0	6.6	40.5	54.9	26.7	49.0	7.4	7.8	7.0	42.6	42.1	0.0	
9/11/2021	Average	12.3	2.3	60.3	972.3	1063.8	6.7	35.6	54.5	18.9	48.3	7.3	7.3	7.0	41.7	41.8	0.0	Normal(ON)
	Min	9.9	0.0	0.0	885.4	1014.1	6.3	31.4	54.4	12.8	46.0	7.2	7.1	7.0	41.2	41.5	0.0	
	Max	15.3	609.9	127.5	995.7	1091.2	7.1	41.8	54.8	23.0	50.9	7.5	7.8	7.0	42.3	42.1	0.0	
9/12/2021	Average	12.2	2.6	42.5	970.0	1060.9	6.9	36.3	54.6	18.2	48.5	7.3	7.5	7.0	41.6	41.5	0.0	Normal(ON)
	Min	9.4	0.0	1.4	885.9	1033.7	6.5	28.0	54.4	13.7	46.7	7.2	7.4	7.0	41.3	41.4	0.0	
	Max	14.6	390.6	113.2	1010.0	1093.6	7.2	40.9	54.8	26.4	49.8	7.4	7.7	7.0	41.8	41.7	0.0	
9/13/2021	Average	12.3	3.8	51.1	966.1	1060.3	6.5	33.6	54.5	20.9	47.6	7.3	7.6	7.0	40.7	41.2	0.0	Normal(ON)
	Min	8.5	0.0	-0.1	896.3	954.0	6.3	27.4	54.4	16.6	45.9	7.2	7.4	7.0	40.3	40.9	0.0	
	Max	15.9	771.1	139.7	1037.8	1090.8	6.8	38.1	54.8	27.1	49.7	7.4	7.7	7.0	41.3	41.6	0.0	
9/14/2021	Average	12.4	1.9	48.6	905.5	1051.4	7.0	37.0	54.6	17.7	49.1	7.3	7.7	7.0	40.6	41.1	0.0	Normal(ON)
	Min	9.7	0.0	12.9	708.4	948.8	6.4	30.5	52.6	9.5	46.6	7.3	7.5	7.0	40.1	40.4	0.0	
	Max	15.4	637.7	121.8	951.4	1087.9	7.7	45.9	55.4	24.0	52.5	7.4	8.1	7.0	43.3	43.9	0.0	
9/15/2021	Average	11.8	2.3	56.6	957.7	1066.2	6.8	36.8	54.6	17.9	48.3	7.3	7.7	7.0	42.6	42.7	0.0	Normal(ON)
	Min	9.5	0.0	1.1	931.2	1051.9	6.6	32.5	54.4	13.8	46.9	7.2	7.4	7.0	41.3	41.4	0.0	
	Max	13.5	542.8	118.8	1006.4	1100.5	7.5	40.9	54.9	22.1	49.6	7.4	7.8	7.0	43.3	43.5	0.0	
9/16/2021	Average	11.9	1.5	57.3	934.2	1063.7	6.6	36.0	54.5	18.6	47.6	7.3	7.5	7.0	42.0	42.3	0.0	Normal(ON)
	Min	7.6	0.0	0.0	920.9	986.4	6.3	28.8	54.4	14.1	46.3	7.2	7.3	6.9	41.8	41.8	0.0	
	Max	15.0	419.9	369.9	965.0	1087.7	7.0	40.5	54.8	25.6	48.8	7.8	8.0	7.0	42.3	42.6	0.0	
9/17/2021	Average	12.0	1.8	55.1	945.2	1064.5	6.9	36.3	54.8	18.6	48.5	7.3	7.4	6.9	41.6	41.6	0.0	Normal(ON)
	Min	9.1	0.0	14.3	901.8	1040.8	6.3	26.7	54.4	9.9	45.1	7.2	7.2	6.5	40.7	40.5	0.0	
	Max	14.3	732.2	148.9	1012.3	1103.0	7.6	46.0	56.1	27.8	53.2	7.4	7.7	7.1	42.3	42.3	0.0	
9/18/2021	Average	12.2	1.6	50.0	937.8	1062.2	6.7	33.6	54.5	20.9	47.0	7.4	7.6	7.0	39.4	41.0	0.0	Normal(ON)
	Min	9.2	0.0	2.3	860.0	1034.8	6.1	29.7	54.4	16.1	45.8	7.3	7.4	7.0	23.9	40.2	0.0	
	Max	14.3	579.8	152.8	975.6	1089.7	7.2	38.6	54.8	25.0	49.0	7.7	7.8	7.0	42.6	42.2	0.0	

Stericycle

September 2021 Incineration Averages Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp	IDFanTemp°C	QunchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	OpMode
9/19/2021	Average	13.2	0.9	46.3	917.2	1043.9	6.2	31.9	54.1	22.1	46.4	7.5	7.7	7.0	34.4	40.4	0.0	Normal(ON)/Shutdown/Off/Startup
	Min	10.5	0.0	0.0	646.9	728.5	5.9	25.0	42.7	-5.7	29.6	7.4	7.5	7.0	0.1	13.4	0.0	
	Max	20.4	294.9	177.9	996.0	1096.3	6.7	48.4	54.7	29.5	49.5	8.1	8.1	7.0	42.6	41.8	0.0	
9/20/2021	Average	15.1	4.2	23.9	654.9	918.0	6.4	46.4	47.0	0.5	37.2	7.8	7.9	7.0	5.9	25.0	0.0	Startup/Shutdown/Startup/Normal(ON)
	Min	5.6	0.0	0.0	376.6	624.9	5.8	25.0	29.4	-43.1	17.3	7.3	7.5	6.9	0.1	0.0	0.0	
	Max	20.4	668.3	177.9	996.0	1096.3	7.1	79.6	55.5	29.5	50.2	8.6	9.0	7.1	43.2	43.4	0.0	
9/21/2021	Average	11.5	2.3	48.2	936.2	1062.0	7.2	34.9	54.8	19.9	49.2	7.4	7.6	7.0	42.7	42.4	0.0	Normal(ON)
	Min	8.8	0.0	17.9	779.7	1026.9	7.1	30.3	54.6	15.3	47.7	7.2	7.4	7.0	41.2	41.8	0.0	
	Max	14.8	515.4	144.9	982.6	1086.6	7.3	39.6	55.1	24.4	51.7	7.9	7.9	7.0	43.7	42.8	0.0	
9/22/2021	Average	11.6	4.0	54.4	924.8	1062.7	6.7	34.4	54.6	20.2	47.2	7.5	7.4	7.2	41.4	41.7	0.0	Normal(ON)
	Min	7.7	0.0	0.0	832.2	1013.5	6.2	30.3	54.4	15.5	45.3	7.3	6.7	6.9	41.2	40.3	0.0	
	Max	14.2	608.7	372.1	949.4	1091.8	7.2	39.1	54.9	24.5	49.3	7.8	7.8	7.8	41.6	42.4	0.0	
9/23/2021	Average	11.7	1.0	52.4	931.4	1064.6	6.3	33.5	54.5	21.0	46.8	7.6	7.3	7.3	40.8	40.1	0.0	Normal(ON)
	Min	9.2	0.0	15.2	912.1	1012.7	6.1	28.0	54.4	15.1	44.5	7.3	6.8	7.2	40.2	39.4	0.0	
	Max	14.0	731.3	139.6	952.6	1099.6	6.7	39.4	54.7	26.4	48.8	8.0	7.5	7.3	41.2	40.5	0.0	
9/24/2021	Average	13.4	4.3	31.2	793.0	1027.1	6.0	31.6	45.9	14.4	39.6	8.0	7.6	7.4	35.7	35.6	0.0	Normal(ON)/Shutdown/Off/Startup
	Min	9.0	0.0	0.0	527.6	561.8	5.8	24.9	29.2	-18.8	20.5	7.5	6.9	7.0	0.1	0.0	0.0	
	Max	20.4	799.5	160.1	972.5	1094.8	6.3	51.8	54.6	29.6	47.5	9.2	9.2	7.9	42.3	42.3	0.0	
9/25/2021	Average	12.0	1.8	88.2	924.0	1062.8	6.2	31.0	54.1	23.0	46.3	7.7	7.0	7.4	41.3	42.0	0.0	Startup/Normal(ON)
	Min	9.2	0.0	14.9	714.0	1031.7	5.8	26.0	42.4	11.3	40.4	7.2	6.5	7.3	41.0	41.7	0.0	
	Max	14.5	561.4	242.4	950.9	1088.5	6.7	36.6	54.5	28.5	48.5	8.2	7.3	7.8	41.7	42.4	0.0	
9/26/2021	Average	17.5	6.7	22.1	522.5	595.8	6.5	46.3	39.4	-6.9	34.2	7.9	7.7	3.7	17.3	17.7	0.0	Normal(ON)/Shut-down/Off
	Min	9.1	0.0	0.0	223.6	178.8	5.7	25.0	25.9	-42.3	20.3	7.2	7.3	0.0	0.1	0.0	0.0	
	Max	20.4	75.0	96.2	795.6	1063.8	7.1	71.9	54.5	29.4	45.1	8.6	8.3	8.7	41.1	42.1	0.0	
9/27/2021	Average	20.3	0.0	0.0	167.4	137.7	7.1	50.1	27.0	-23.1	32.4	8.7	8.5	0.0	0.0	0.0	0.0	Off/Startup
	Min	20.1	0.0	0.0	125.3	108.3	7.1	43.7	26.5	-25.8	31.4	8.6	8.3	0.0	0.0	0.0	0.0	
	Max	20.4	0.0	0.0	223.4	178.6	7.1	53.2	27.5	-16.4	32.7	8.7	8.6	0.0	0.1	0.0	0.0	
9/28/2021	Average	20.3	0.0	0.0	167.4	137.7	7.1	50.1	27.0	-23.1	32.4	8.7	8.5	0.0	0.0	0.0	0.0	Startup
	Min	20.1	0.0	0.0	125.3	108.3	7.1	43.7	26.5	-25.8	31.4	8.6	8.3	0.0	0.0	0.0	0.0	
	Max	20.4	0.0	0.0	223.4	178.6	7.1	53.2	27.5	-16.4	32.7	8.7	8.6	0.0	0.1	0.0	0.0	
9/29/2021	Average	15.0	1.9	49.6	661.2	992.5	6.3	32.1	42.5	10.4	38.2	7.8	7.9	4.2	29.1	28.2	0.0	Startup/Normal(ON)
	Min	9.0	0.0	-0.3	518.9	858.6	5.9	21.4	21.1	-18.9	21.7	6.6	6.6	0.0	0.0	0.0	0.0	
	Max	20.4	670.7	303.4	929.9	1164.0	6.9	40.6	54.5	31.3	49.9	8.5	9.0	7.6	42.4	41.3	0.0	
9/30/2021	Average	11.1	1.8	55.0	929.7	1071.3	6.0	31.5	54.4	22.9	47.4	7.6	7.2	7.4	41.7	40.9	0.0	Normal(ON)
	Min	7.8	0.0	8.6	891.8	1024.6	5.8	24.7	54.2	19.1	44.8	7.2	6.6	7.3	41.6	40.7	0.0	
	Max	14.3	650.5	200.9	960.8	1186.7	6.1	35.3	54.5	29.5	48.9	8.0	7.6	7.8	41.8	41.1	0.0	

Stericycle

September 2021 Incineration Feed Data

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 Sum
9/1/2021 0:00	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**	
9/2/2021 0:00	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**	
9/3/2021 0:00	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**	
9/4/2021 0:00	0	0	0	0	0	0	0	0	0	0	0	0	509.6	506.6	415.6	518.8	557.1	530.4	166.6	441.2	331.4	584.2	237.8	534.7	**5334**	
9/5/2021 0:00	163.7	96	97.2	573.7	618.2	573.3	151.6	504.5	535.3	522.7	524.5	547.3	560.7	549.2	271.4	506.8	420.6	518.9	371.6	400.7	407.1	405.3	409.1	270.6	**10000**	
9/6/2021 0:00	0	0	0	0	0	0	0	0	305	546.7	544.9	509.6	492.5	361.2	292.4	303.9	562.5	405.8	352.8	78.3	605.9	0	487.4	356.1	**6205**	
9/7/2021 0:00	0	67.4	590.1	534.3	561.2	383.8	180.4	497.6	490.6	499.2	487.5	499.2	492.9	496.4	487.2	497	496.1	490.6	79.9	506.8	603	500.4	503.3	55.1	**10000**	
9/8/2021 0:00	371.6	507.6	418.1	507	0	0	0	0	0	0	0	0	0	0	508.6	602	592.9	597.2	484.2	652.1	603.8	632.3	670	613.1	**7760.5**	
9/9/2021 0:00	355.4	510.6	426.8	502.7	499	551.3	501.7	484.7	520.9	505.8	451	210.3	525.3	519.9	244.7	440.7	506.5	364.4	312.2	653.2	617.2	295.7	0	0	**10000**	
9/10/2021 0:00	0	3.2	505.3	355	0	365.3	123.8	317.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1670**	
9/11/2021 0:00	61.2	599.2	607.3	548.8	291.8	392.8	33.5	473.4	499.4	498.6	500.8	493.7	497.6	500.2	500.5	499.0	501.0	497.9	143.2	641.4	600.7	606.9	11.1	0.0	**10000**	
9/12/2021 0:00	312.0	612.5	610.3	606.6	605.7	605.0	0.0	167.8	600.0	237.8	500.0	401.1	272.0	399.4	399.8	399.8	399.8	400.0	138.8	504.1	500.8	503.7	504.3	318.7	**10000**	
9/13/2021 0:00	0.0	503.2	350.0	500.2	500.6	500.9	498.3	58.6	507.9	540.8	329.9	509.4	541.1	546.6	286.6	540.2	546.9	498.2	58.7	143.5	499.5	539.6	531.4	467.9	**10000**	
9/14/2021 0:00	0.0	0.0	0.0	0.0	0.0	295.1	599.2	607.4	615.5	603.4	608.7	290.2	606.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**4225.8**	
9/15/2021 0:00	0	238.1	0	444	0	323.6	180.7	606.8	606.8	597.9	403.4	607.3	405.4	604.8	612.7	505.6	612	612.2	159.4	543.3	600	600	600	136	**10000**	**190768.2**
9/16/2021 0:00	599.9	600	0	500.2	552.1	432.6	258.8	623.4	600.3	604.3	467.3	73.2	604.6	607.6	604.3	601.5	600.6	179.3	330.1	505.8	539.7	0	0	0	**9885.6**	
9/17/2021 0:00	504.6	501.7	503.7	503.7	501.8	499.9	499.2	505.9	599.9	602.3	599.7	503.9	601.7	508.8	601.7	502.8	615	586.4	0	0	0	217.6	0	0	**9960.3**	
9/18/2021 0:00	507.8	501.3	502	502.4	500	505.2	502	635.1	605.5	403.8	605.7	306.9	255.3	600.5	360.9	621.3	604.3	429.6	325.1	503.8	207.8	0	0	0	**9986.3**	
9/19/2021 0:00	503	500.1	502.2	499.6	505.9	503.9	501.4	377.7	614.6	615.8	604.7	338.9	640.9	610	618.7	605.9	523.2	412.1	0	0	0	0	0	0	**9478.6**	
9/20/2021 0:00	0	0	0	0	0	502.8	219.4	36.4	379.3	0	0	0	0	0	0	0	0	15.6	4.4	0	0	212.2	544	251.3	**2165.4**	
9/21/2021 0:00	455.3	599.3	599.9	376.4	601.8	376.4	239.5	499.8	499.2	500.4	500.6	503.4	502.5	504.2	502.5	508.1	501.3	501.1	500.1	272.6	0	0	0	0	**9544.4**	
9/22/2021 0:00	600.4	600.3	601.5	505.8	600.8	601.6	284.5	372.1	39.4	0	617	508	310.3	628.2	148.8	608.1	240.8	386.3	147.9	500.8	501.3	499.3	509.2	93.6	**9906**	
9/23/2021 0:00	500.5	500.1	501.2	501.9	502.3	26.4	220.8	360.2	611.5	604.1	336.2	617.8	604.5	508.2	0	620.7	312	417.5	274.7	601.4	573.1	464.8	0	0	**9659.9**	
9/24/2021 0:00	603.5	600.7	587.6	108.3	599.5	292.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	111	488.9	600.4	498.8	**4491.1**	
9/25/2021 0:00	499.9	0	499.9	499	600.5	501.8	205	570.5	606.5	522.1	610.6	560.3	602	554.9	210.1	481.1	367.7	406.6	153.6	0	0	0	0	0	**8452.1**	
9/26/2021 0:00	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**	
9/27/2021 0:00	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**	
9/28/2021 0:00	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**	
9/29/2021 0:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	137.5	508.3	304	267.2	0	0	302.1	597.9	**2117**	
9/30/2021 0:00	527.8	501.4	289.5	600.7	592.8	259	0	550.6	444.2	616.6	585.9	568.1	619.7	509.1	610.9	401.4	607.8	622.1	414.6	536	68	0	0	0	**9926.2**	

Stericycle

September 2021 CEM Calibration Log

TheDate	COSpanRes	CO Calgas	COSpan%Drift	NOxSpanRes	NOX Calgas	NOxSpan%drift	O2SpanRes	O2 Calgas	O2SpanDrift	COZeroRe	COZero%D	NOxZeroRes	NOxZero%Drift	O2ZeroRes	O2 Zerogas	O2ZeroDrift	Comment
9/1/2021 15:49	0	87.5	0	0	779	0	0	8.08	0	0	0	-1	-0.1	0	0	0	
9/1/2021 15:53	89	87.5	0.15	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
9/1/2021 15:55	0	87.5	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
9/1/2021 15:58	0	87.5	0	752	779	2.7	0	8.08	0	0	0	0	0	0	0	0	
9/6/2021 1:33	0	87.5	0	0	779	0	0	8.08	0	0	0	0	0	-0.3	0	0.3	
9/6/2021 1:35	92	87.5	0.45	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
9/6/2021 1:39	0	87.5	0	777	779	0.2	0	8.08	0	0	0	0	0	0	0	0	
9/6/2021 1:41	0	87.5	0	0	779	0	7.9	8.08	0.1799998	0	0	0	0	0	0	0	
9/7/2021 0:42	0	87.5	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
9/7/2021 0:45	90	87.5	0.25	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
9/7/2021 0:47	0	87.5	0	779	779	0	0	8.08	0	0	0	0	0	0	0	0	
9/7/2021 0:49	0	87.5	0	0	779	0	8.3	8.08	0.2200003	0	0	0	0	0	0	0	
9/7/2021 9:39	0	87.5	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
9/7/2021 9:44	0	87.5	0	0	779	0	0	8.08	0	0	0	0	0	0.1	0	0.1	
9/7/2021 9:47	89	87.5	0.15	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
9/22/2021 8:00	0	87.5	0	0	779	0	0.1	8.08	7.98	0	0	0	0	0	0	0	
9/22/2021 8:04	0	87.5	0	0	779	0	25.8	8.08	17.72	0	0	0	0	0	0	0	
9/22/2021 8:09	0	87.5	0	0	779	0	0	8.08	0	1	0.333333	0	0	-0.4	0	0.4	
9/22/2021 8:12	0	87.5	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
9/22/2021 8:16	0	87.5	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
9/22/2021 8:20	88	87.5	0.05	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
9/22/2021 8:23	0	87.5	0	780	779	0.1	0	8.08	0	0	0	0	0	0	0	0	
9/22/2021 8:25	0	87.5	0	0	779	0	8.4	8.08	0.3199997	0	0	0	0	0	0	0	
9/22/2021 8:28	0	87.5	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
9/22/2021 8:40	0	87.5	0	0	779	0	8.2	8.08	0.1199999	0	0	0	0	0	0	0	
9/26/2021 4:06	0	87.5	0	0	779	0	0	8.08	0	1	0.333333	0	0	2.1	0	2.1	
9/29/2021 20:41	0	87.5	0	0	779	0	0	8.08	0	0	0	21	2.1	15.1	0	15.1	
9/29/2021 20:51	0	87.5	0	0	779	0	0	8.08	0	0	0	-1	-0.1	2.7	0	2.7	
9/29/2021 20:55	0	87.5	0	0	779	0	0	8.08	0	0	0	-1	-0.1	2.6	0	2.6	
9/29/2021 21:01	0	87.5	0	0	779	0	0	8.08	0	0	0	0	0	-0.1	0	0.1	
9/29/2021 21:06	67	87.5	2.05	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
9/29/2021 21:15	0	87.5	0	0	779	0	0	8.08	0	0	0	3	0.3	2.6	0	2.6	
9/29/2021 21:18	0	87.5	0	0	779	0	0	8.08	0	0	0	0	0	-0.1	0	0.1	
9/29/2021 21:23	88	87.5	0.05	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
9/29/2021 21:30	0	87.5	0	0	779	0	7.6	8.08	0.48	0	0	0	0	0	0	0	
9/29/2021 21:33	0	87.5	0	0	779	0	8.2	8.08	0.1199999	0	0	0	0	0	0	0	
9/29/2021 21:35	0	87.5	0	790	779	1.1	0	8.08	0	0	0	0	0	0	0	0	
9/29/2021 21:38	0	87.5	0	779	779	0	0	8.08	0	0	0	0	0	0	0	0	
9/29/2021 21:42	0	87.5	0	0	779	0	0	8.08	0	0	0	2	0.2	0.2	0	0.2	
9/29/2021 21:44	0	87.5	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	

Carbon Monoxide > 8ppm 12 hour alarm

Stericycle
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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
9/4/2021	13:00	0:00	11:00	Normal	11.3	13.0	Large CO spike occurred as the incinerator was heating up in start-up no waste had been fed prior. As the stack was closed when the incineator was switched into "NORMAL" mode it caused a jump in the CO values due to the O2% correction.	No waste had been fed to this point. High CO emmisions based the buring of natural gas.
9/21/2021	5:00	23:00	18:00	Normal	9.4	10.8	Large CO spike occurred as the incinerator was heating up in start-up no waste had been fed prior. As the stack was closed when the incineator was switched into "NORMAL" mode it caused a jump in the CO values due to the O2% correction.	No waste had been fed to this point. High CO emmisions based the buring of natural gas.

Carbon Monoxide > 8ppm 4 hour alarm

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Carbon Monoxide > 8ppm 4 hour alarm

Date	Start Time	Stop Time	Duration	Op. Mode	Stack CO @ 11% O2	Stack CO as mg/m^3	Explanation	Actions Taken
9/4/2021	13:00	16:00	3:00	Normal	31.6	36.5	Large CO spike occurred as the incinerator was heating up in start-up no waste had been fed prior. As the stack was closed when the incineator was switched into "NORMAL" mode it caused a jump in the CO values due to the O2% correction.	No waste had been fed to this point. High CO emmisions based the buring of natural gas.
9/14/2021	18:00	20:00	2:00	Normal	8.8	10.2	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
9/15/2021	2:00	6:00	4:00	Normal	8.2	9.5	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
9/20/2021	21:00	1:00	4:00	Normal	17	19.6	Large CO spike occurred as the incinerator was heating up in start-up no waste had been fed prior. As the stack was closed when the incineator was switched into "NORMAL" mode it caused a jump in the CO values due to the O2% correction.	No waste had been fed to this point. High CO emmisions based the buring of natural gas.
9/22/2021	2:00	5:00	3:00	Normal	10	11.5	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
9/24/2021	5:00	9:00	4:00	Normal	19	21.9	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
9/26/2021	2:00	8:00	6:00	Normal/Shutdown	26.2	30.2	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.

Carbon Monoxide > 8ppm 4 hour alarm

9/30/2021	6:00	7:00	1:00	Normal	8.1	9.3	CO spike caused by waste falling over in the machine	Operator monitored the machine and slowed feeding as needed.

Condenser pH out of range (<6.4pH / >10.4pH)

Condenser pH out of range (<6.4pH / >10.4pH)

Date	Start Time	Stop Time	Duration	Op. Mode	Condenser pH	Explanation	Action Taken
9/4/2021	12:59	16:14	3:15	Normal	5.71	Condenser PH dropped due to pump break down	Maintenance performed the necessary repairs

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Atomizer Amps < 36

	Start	Stop		Op.	Atom. A	Atom. B		Action
Date	Time	Time	Duration	Mode	amps	amps	Explanation	Taken
9/18/2021	11:07:00	14:33:00	3:26:00	Normal	27.0	40.8	Low amerag in Atomizer A was caused by a clogged pot filter	Stericycle maintenance shut-down the atomizer and the incinerator ran on 1 rotarty atomizer until the pot filter was cleaned.

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Secondary Chamber Temperature < 1000°C

Date	Start Time	Stop Time	Duration	Op. Mode	Temp. °C	Explanation	Actions Taken
9/8/2021	5:33	7:46	2:13	Shut-down	958	Low upper chamber temperatre caused by high flame-port air setting during shut-down process.	The incinerator was brought to a controlled shut-down.
9/14/2021	3:05	5:30	2:25	Normal	976	Operator error on FPA	Operator changed the FPA and brought the temperature back up