

Stericycle®

**2022 Q1
INCINERATION
REPORT**



Stericycle, ULC

95 Deerhurst Drive

Brampton, ON

L6T 5R7

Tel.: (905) 789-6008

Fax: (905) 789-5549

April 29th, 2022

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 2022.

During January 2022 there were 17 occurrences of the 4-hour CO alarm & 3 occurrences of the 12-hour CO alarm. In February 2022 there were 13 occurrences of the 4-hour CO alarm and 4 occurrences of the 12-hour CO alarm. In March 2022 there were 7 occurrences of the 4-hour CO alarm and 1 occurrence of the 12-hour CO alarm. Stericycle will continue to work with the incinerator operators to further reduce the number of CO alarms.

There was 1 occurrences of the 24-hour NOX alarm triggered in Q1 of 2022 due to a frozen ammonia feed line.

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

FIRST QUARTER 2022 INCINERATOR QUARTERLY REPORT - SUPPLEMENTAL INFORMATION

- The Emergency Bypass stack was used one (1) time during Q1 2022. A detailed description is provided in this report. Stericycle believes this was an electrical glitch that triggered the bypass alarm; however, no other indications of a bypass were present.
- 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 first quarter of 2022, 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 first quarter of 2022.
- Stericycle Inc. operated the incinerator on the following days during the third quarter:

Start-up	Shut Down
12/31/2021 @ 10:09	01/10/2022 @ 03:35
01/10/2022 @ 08:52	01/10/2022 @ 13:57
01/10/2022 @ 14:06	01/23/2022 @ 00:09
01/28/2022 @ 14:49	02/04/2022 @ 08:04
02/04/2022 @ 12:23	02/10/2022 @ 14:58
02/10/2022 @ 19:39	02/11/2022 @ 02:57
02/11/2022 @ 12:04	02/18/2022 @ 22:32
02/19/2022 @ 12:20	03/04/2022 @ 12:04
03/04/2022 @ 22:51	03/12/2022 @ 18:59
03/17/2022 @ 11:12	03/18/2022 @ 18:32
03/19/2022 @ 00:27	03/20/2022 @ 00:32
03/20/2022 @ 12:05	03/22/2022 @ 17:14
03/22/2022 @ 21:26	03/23/2022 @ 18:35
03/24/2022 @ 01:28	03/25/2022 @ 21:17
03/26/2022 @ 01:21	03/27/2022 @ 09:03
03/27/2022 @ 13:03	03/28/2022 @ 19:56
03/29/2022 @ 00:49	03/29/2022 @ 18:17
03/30/2022 @ 03:27	

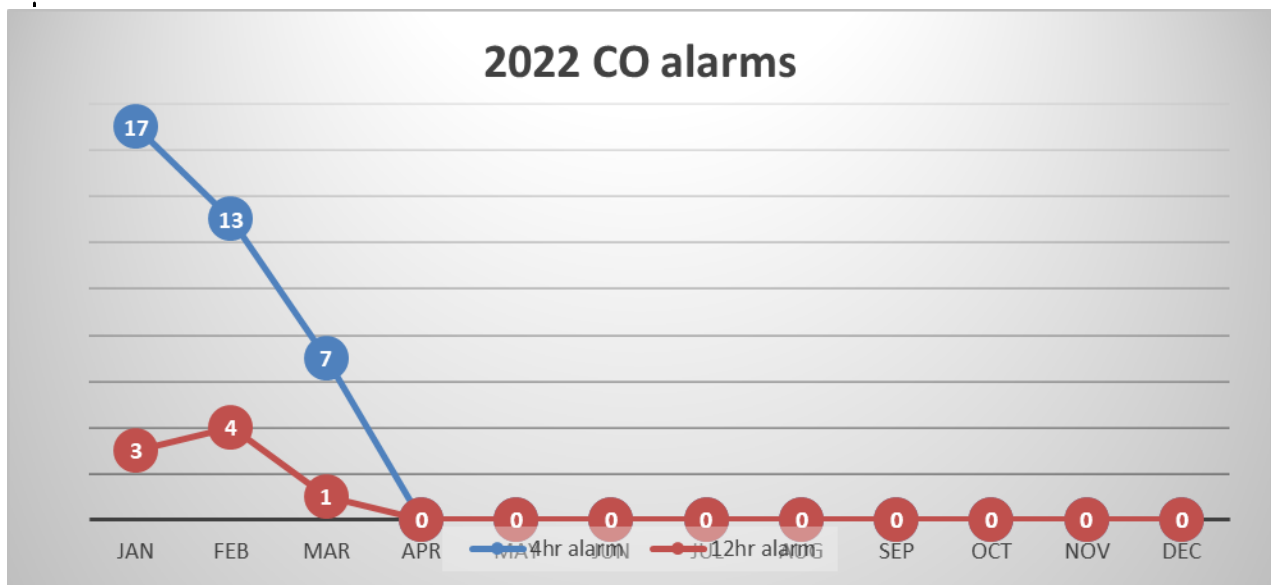
During Q1 of 2022 routine maintenance was performed on the incinerator during the scheduled shutdowns.

Emergency Bypass Summary

Date	Start Time	End Time	Duration	Emission Volume (m ³)	Reason	Corrective Action
3/23/2022	14:31:00	14:32:00	0:01:00	3.65	Operator reported the emergency bypass stack opened while the electrical contractors were working in the panel.	While the electrical contractors were conducting a PLC program review and wire tracing Quench tank sensors, the operator reported that the emergency bypass stack opened for a few seconds and then closed. The exact cause of the bypass is unknown at this time. It can be presumed that the electrical work that was taking place at the time trigger the bypass.

CO Alarm Chart Q1 2022

Month	4 Hour CO average alarms	12 Hour CO average alarms
January	17	3
February	13	4
March	7	1
April		
May		
June		
July		
August		
September		
October		
November		
December		



2021 CO alarms vs. 2022 CO alarms

	2021		2022	
Month	4 Hr. Alarm	12 Hr. Alarm	4 Hr. Alarm	12 Hr. Alarm
January	13	0	17	3
February	11	0	13	4
March	19	2	7	1
April	18	2		
May	5	0		
June	5	1		
July	10	0		
August	6	0		
September	8	2		
October	7	0		
November	7	0		
December	9	1		

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 2022.

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 MECF 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 stylized flourish extending to the right.

Dan Kokol

ESH Specialist

Phone: 905-595-8532

Email: dkokol@stericycle.com



March 25th, 2022

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 #: 4686-CCSQCF

On March 23rd, 2022, at approximately 14:31 the emergency bypass stack was opened due to a suspected false reading from the APC system to the control panel.

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) minute. During this period no waste was injected into the incinerator and the upper chamber was maintained at 1000°C by natural gas only.

On March 23rd, 2022, at approximately 14:59 a call was placed to the Spills Action Control center by Stericycle EHS Specialist Dan Kokol to report the use of the emergency bypass stack. At approximately 14:31 the emergency bypass stack opened while the electrical contractors were working in the panel. While the electrical contractors were conducting a PLC program review and wire tracing Quench tank sensors, the operator reported that the emergency bypass stack opened for a few seconds and then closed. The exact cause of the bypass is unknown currently. It can be presumed that the electrical work that was taking place at the time triggered the bypass. There were no additional indicators of system failures at the time of the bypass, as such it is reasonable to presume that the cap did not fully open. Additionally, there would have been draft from the I.D. fan that would have drawn air in through the open cap preventing excess emissions from exiting the emergency bypass stack. Stericycle is reporting this incident out of the spirit of transparency but do not believe a full bypass event occurred based on the data available.

During the bypass approximately 3.65m³ of flue gases exited the emergency bypass stack.

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: Friday, March 25, 2022 12:20 PM
To: Kokol, Dan
Subject: RE: Emergency Bypass Report ref no. 4686-CCQCF

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Thank you Dan, I've noted the details of this minor release and 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: March-25-22 10:26 AM
To: Broux, Christelle (MECP) <Christelle.Broux@ontario.ca>
Subject: Emergency Bypass Report ref no. 4686-CCQCF

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Good morning Christelle,
Attached is the follow-up report for the reported use of the emergency bypass stack at the Stericycle Deerhurst facility on March 23rd, 2022.

Respect the unexpected, think through your risks; safety is a choice you make

Dan Kokol

EHS Specialist

O: +1 905-595-8532 | M: +1 416-702-5470 | stericycle.ca | shredit.ca [Stericycle's 10 Critical Safety Rules](#)

95 Deerhurst Dr, Brampton, ON L6T 5R7

  Shred-it® is a Stericycle solution.

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January 2022 Incineration Averages Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp°C	IDFanTemp°C	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	OpMode
1-Jan-22	Average	11.7	3.2	46.8	821.8	1039.4	6.6	28.3	54.4	26.1	42.3	7.7	7.5	7.3	39.8	39.8	0.0	Normal(ON)
	Min.	6.1	0.0	16.7	369.1	936.9	6.6	22.2	54.4	18.6	40.8	7.4	7.2	7.2	39.5	38.8	0.0	
	Max.	16.5	611.5	144.8	986.3	1084.5	6.6	35.8	54.5	32.3	45.8	8.1	8.4	7.6	40.5	40.4	0.0	
2-Jan-22	Average	11.8	2.4	68.2	990.8	1054.8	6.8	30.6	54.6	24.0	42.0	7.8	7.2	7.3	40.1	40.2	0.0	Normal(ON)
	Min.	9.0	0.0	27.5	937.1	1007.2	6.6	26.0	54.4	11.4	40.0	7.5	7.1	7.2	37.6	39.6	0.0	
	Max.	14.3	554.2	163.9	1013.8	1087.7	9.3	46.0	57.4	28.5	51.1	8.0	7.4	7.5	41.3	40.5	0.0	
3-Jan-22	Average	12.2	2.8	67.9	1000.1	1057.0	6.8	33.3	53.8	20.5	42.2	7.7	7.2	7.3	39.9	40.0	0.0	Normal(ON)
	Min.	9.6	0.0	0.0	993.2	1012.9	4.5	20.1	48.8	10.3	34.9	7.7	7.1	7.1	33.6	39.2	0.0	
	Max.	14.0	837.4	186.9	1007.7	1097.3	9.7	47.3	57.7	28.7	52.7	7.8	7.4	7.5	41.0	40.7	0.0	
4-Jan-22	Average	12.1	4.5	57.2	980.8	1060.4	4.2	18.2	49.4	31.3	37.4	7.7	7.2	7.3	41.2	40.4	0.0	Normal(ON)
	Min.	9.0	0.0	19.5	730.1	979.9	3.8	12.1	48.1	27.1	34.5	7.5	7.1	7.1	40.5	38.7	0.0	
	Max.	14.4	850.1	199.0	1013.0	1093.6	4.8	23.0	50.9	37.1	40.0	8.0	7.5	7.4	41.7	40.6	0.0	
5-Jan-22	Average	11.6	4.1	60.4	925.2	1065.8	4.3	19.5	49.7	30.2	39.5	7.9	7.3	7.3	43.0	41.9	0.0	Normal(ON)
	Min.	8.4	0.0	-0.1	688.4	1001.8	3.8	12.1	48.1	25.7	36.3	7.7	7.2	7.2	40.5	38.3	0.0	
	Max.	14.4	638.2	143.9	1010.4	1100.6	4.7	25.2	51.4	37.2	42.1	8.1	7.6	7.5	43.5	43.7	0.0	
6-Jan-22	Average	12.2	3.9	79.2	994.2	1072.9	4.4	22.8	49.6	26.8	38.2	7.8	7.4	7.6	43.1	43.5	0.1	Normal(ON)
	Min.	10.3	0.0	28.4	952.4	962.5	4.2	18.4	46.8	23.9	34.7	7.6	7.1	7.3	42.8	43.1	0.0	
	Max.	14.4	617.9	167.5	1012.6	1145.9	4.6	28.1	52.5	28.5	41.9	8.0	7.7	7.8	43.2	43.8	1.0	
7-Jan-22	Average	12.3	1.3	54.5	965.1	1050.7	4.3	20.2	48.6	28.4	35.7	8.1	7.2	7.7	43.0	43.4	0.1	Normal(ON)
	Min.	8.9	0.0	23.7	860.0	953.0	4.1	15.1	46.5	24.8	32.4	7.3	7.1	7.6	42.9	43.3	0.0	
	Max.	15.1	317.0	144.4	1016.2	1091.2	4.6	27.5	52.4	32.3	39.5	9.1	7.5	7.8	43.1	43.5	1.0	
8-Jan-22	Average	12.2	1.5	44.4	982.4	1051.8	4.3	21.2	50.7	29.5	38.4	8.1	7.3	7.8	42.9	43.5	0.0	Normal(ON)
	Min.	9.2	0.0	19.7	906.5	968.4	4.0	14.1	48.3	25.5	35.0	7.4	7.0	7.6	42.7	43.3	0.0	
	Max.	15.1	385.3	136.5	1017.6	1092.7	4.5	27.3	52.8	35.4	42.3	8.6	7.5	7.9	43.1	43.7	0.0	
9-Jan-22	Average	12.0	3.7	43.9	911.9	1047.0	4.2	18.1	49.9	31.7	38.5	8.4	7.2	7.8	42.8	43.5	0.0	Normal(ON)
	Min.	7.8	0.0	15.4	714.6	984.3	3.9	14.9	47.6	28.2	37.2	8.0	7.0	7.5	42.3	43.1	0.0	
	Max.	15.3	873.8	123.0	1000.0	1091.2	4.7	23.9	52.5	36.4	42.2	8.6	7.6	8.0	43.2	43.9	0.0	
10-Jan-22	Average	13.9	1.8	51.2	854.3	976.1	5.0	22.9	49.7	26.8	37.1	8.7	7.4	8.0	35.2	35.0	0.2	Normal(ON)/Shut-down/Off/Start-up/Normal(ON)
	Min.	6.7	0.0	0.0	639.2	417.4	3.4	7.6	42.4	16.3	23.3	8.5	7.0	7.3	0.1	0.0	0.0	
	Max.	20.4	574.0	213.1	979.4	1091.3	6.6	32.2	53.9	34.9	43.7	9.0	8.5	12.3	43.2	43.6	1.0	
11-Jan-22	Average	12.9	0.4	91.2	904.2	1054.2	6.6	28.2	53.6	25.4	39.3	8.6	7.7	7.8	42.0	40.6	0.6	Normal(ON)
	Min.	10.5	0.0	21.0	688.7	1010.8	6.6	21.8	52.8	20.5	36.1	8.4	7.0	7.3	41.6	40.4	0.0	
	Max.	14.9	104.1	247.0	1006.5	1096.0	6.6	33.9	54.5	31.9	43.5	8.7	8.4	7.9	42.2	40.8	1.0	
12-Jan-22	Average	11.9	1.9	44.9	911.6	1043.5	6.6	26.0	53.4	27.4	40.4	8.3	7.6	7.8	42.1	40.7	0.2	Normal(ON)
	Min.	9.0	0.0	17.0	688.8	982.6	6.6	22.6	52.6	24.2	38.5	7.9	7.2	7.5	41.8	40.5	0.0	
	Max.	14.8	702.9	152.1	1018.9	1095.2	6.6	29.5	54.0	31.0	41.8	8.7	8.0	7.9	42.6	41.1	1.0	
13-Jan-22	Average	12.6	7.4	45.9	871.4	1045.3	6.6	24.1	53.4	29.3	39.5	7.9	7.7	7.6	42.3	41.6	0.1	Normal(ON)
	Min.	6.4	0.0	0.3	688.5	973.3	6.6	20.5	52.6	24.1	38.1	7.4	7.3	6.9	41.3	40.1	0.0	
	Max.	15.0	712.3	174.0	1016.7	1101.8	6.6	29.5	54.1	33.5	41.0	8.6	7.9	8.2	43.4	43.6	1.0	
14-Jan-22	Average	11.8	1.7	85.5	892.3	1072.7	6.6	30.4	54.1	23.7	42.5	8.6	7.6	7.9	43.2	43.7	0.7	Normal(ON)
	Min.	9.2	0.0	-0.1	689.2	1020.2	6.6	24.4	53.0	18.0	39.8	8.5	7.2	7.1	43.0	43.5	0.0	
	Max.	14.0	609.3	208.7	968.8	1125.7	6.6	36.4	54.5	29.1	46.7	8.6	7.9	8.2	43.5	44.0	1.0	
15-Jan-22	Average	12.3	1.6	64.8	953.3	1062.9	6.6	31.1	54.3	23.2	40.5	8.4	7.7	8.0	43.0	43.5	0.7	Normal(ON)
	Min.	10.1	0.0	23.2	937.3	972.0	6.6	23.7	53.7	16.2	37.6	8.2	7.2	7.8	42.8	43.4	0.0	
	Max.	15.4	207.2	143.8	992.3	1109.9	6.6	38.3	54.5	30.5	43.4	8.5	8.2	8.1	43.1	43.8	1.0	
16-Jan-22	Average	11.9	3.1	57.8	960.5	1057.5	6.6	27.8	54.3	26.5	38.9	8.2	7.6	7.9	42.9	43.5	0.4	Normal(ON)
	Min.	8.9	0.0	23.9	933.3	988.5	6.6	21.5	53.9	17.5	36.8	7.3	7.2	7.7	42.8	43.2	0.0	
	Max.	14.7	778.1	144.2	987.5	1114.1	6.6	36.9	54.5	33.0	42.5	8.7	8.1	8.1	43.1	43.8	1.0	
17-Jan-22	Average	12.5	5.5	47.5	836.7	1034.3	6.6	24.7	54.0	29.3	39.2	7.8	7.7	7.6	43.1	43.6	0.1	Normal(ON)
	Min.	7.6	0.0	19.0	500.6	930.8	6.6	21.4	53.3	23.2	37.1	7.1	7.2	6.9	42.6	43.3	0.0	
	Max.	15.2	843.9	121.3	985.2	1106.2	6.6	31.2	54.5	32.9	42.5	8.8	8.2	8.0	43.3	43.8	1.0	
18-Jan-22	Average	11.5	2.8	59.0	891.5	1072.8	6.6	30.3	54.2	24.0	42.5	7.6	7.3	7.9	43.0	43.6	0.9	Normal(ON)
	Min.	9.0	0.0	6.0	534.6	990.3	6.6	25.1	53.7	20.7	40.9	7.6	7.2	7.3	42.6	43.3	0.0	
	Max.	14.3	464.0	113.9	957.3	1107.6	6.6	33.7	54.5	28.8	43.8	7.8	7.9	8.0	43.4	43.9	1.0	

January 2022 Incineration Averages Ranges

	TheDate	OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp°C	IDFanTemp°C	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	OpMode
19-Jan-22	Average	11.5	3.1	54.7	933.8	1068.2	6.6	27.7	54.4	26.6	42.1	7.6	7.3	8.0	43.4	43.8	0.5	Normal(ON)
	Min.	8.8	0.0	20.9	911.0	992.8	6.6	23.8	54.2	21.6	40.0	7.4	7.1	7.8	43.1	43.6	0.0	
	Max.	14.9	630.5	121.6	973.2	1096.3	6.6	32.8	54.5	30.5	44.7	7.8	7.5	8.1	43.6	44.0	1.0	
20-Jan-22	Average	11.8	4.0	84.3	923.5	1085.7	6.6	30.6	54.3	23.7	41.7	7.8	7.2	8.0	43.2	43.8	0.7	Normal(ON)
	Min.	9.2	0.0	30.5	916.0	1046.6	6.4	21.2	53.4	16.9	36.7	7.5	7.1	7.6	43.0	43.7	0.0	
	Max.	14.0	669.9	169.2	963.9	1133.1	6.6	37.6	54.5	32.3	44.1	8.1	7.5	8.1	43.3	43.9	1.0	
21-Jan-22	Average	12.4	2.4	61.9	888.3	1057.3	6.6	24.8	54.0	29.2	38.4	7.6	7.3	7.9	43.1	43.7	0.4	Normal(ON)
	Min.	8.2	0.0	15.5	750.7	1003.9	6.4	21.0	53.5	24.7	35.5	7.3	7.1	6.3	43.0	43.5	0.0	
	Max.	15.8	816.9	184.0	970.8	1092.1	6.6	29.6	54.2	32.6	41.6	8.0	7.6	8.4	43.3	43.8	1.0	
22-Jan-22	Average	11.7	5.5	45.5	931.6	1070.7	6.6	28.1	54.2	26.2	41.4	7.7	7.2	8.1	43.3	43.7	0.7	Normal(ON)
	Min.	9.4	0.0	2.4	914.2	1038.4	6.6	23.3	53.7	22.2	39.6	7.4	7.1	8.0	43.2	43.6	0.0	
	Max.	14.2	859.5	161.1	954.8	1123.1	6.6	32.3	54.5	30.6	44.3	8.0	7.4	8.2	43.5	43.8	1.0	
23-Jan-22	Average	19.2	0.2	7.3	472.0	385.0	7.2	59.7	37.1	-22.6	21.1	9.0	9.0	8.8	10.3	10.3	0.2	Normal(ON)/Shut-down/Off
	Min.	10.8	0.0	0.0	168.8	93.3	6.6	26.8	15.4	-49.6	12.0	7.5	7.2	8.0	0.0	0.0	0.0	
	Max.	20.4	22.1	68.1	930.0	1091.4	7.5	79.3	54.4	27.4	42.6	9.6	9.5	9.5	43.4	43.8	1.0	
24-Jan-22	Average	20.3	0.0	0.0	88.8	52.9	6.5	56.8	42.5	-14.3	14.3	9.4	9.4	9.5	0.0	0.0	0.0	Off
	Min.	20.1	0.0	0.0	49.2	36.0	6.0	40.0	37.0	-23.5	12.8	9.3	9.3	9.4	0.0	0.0	0.0	
	Max.	20.4	0.0	0.0	168.6	93.2	7.0	62.1	44.3	4.1	16.5	9.5	9.5	9.5	0.0	0.0	0.0	
25-Jan-22	Average	20.1	0.0	1.4	36.5	30.0	6.0	52.5	42.5	-10.0	15.2	9.2	9.1	9.3	0.0	0.0	0.0	Off
	Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Max.	20.4	0.0	95.0	49.2	35.9	6.2	62.4	52.8	-3.6	16.1	9.3	9.3	9.4	0.0	0.0	0.0	
26-Jan-22	Average	20.2	0.0	0.0	28.2	24.6	5.9	34.7	40.8	6.0	18.9	9.1	9.0	9.3	0.0	0.0	0.0	Off
	Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Max.	20.4	0.0	0.0	31.7	28.3	6.0	43.3	46.9	30.8	26.7	9.2	9.1	9.3	0.1	0.0	0.0	
27-Jan-22	Average	20.2	0.0	0.0	20.2	17.5	5.7	14.6	44.9	30.3	26.0	8.9	8.8	9.1	0.1	0.0	0.0	Off
	Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Max.	20.4	0.0	0.0	22.2	19.9	5.9	16.7	46.5	31.4	27.9	9.0	8.9	9.2	0.1	0.0	0.0	
28-Jan-22	Average	20.2	0.0	0.0	121.3	271.9	5.8	24.5	39.2	14.7	18.1	8.9	8.7	9.0	0.1	0.0	0.0	Off/Start-up
	Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Max.	20.4	0.0	0.0	448.7	793.9	6.0	50.7	47.2	31.1	27.9	8.9	8.8	9.1	0.1	0.0	0.0	
29-Jan-22	Average	14.7	3.5	32.6	753.4	972.6	6.3	34.6	32.9	-1.8	20.6	8.9	8.1	8.4	23.9	23.3	0.0	Start-up/Normal(On)
	Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Max.	20.4	564.4	154.7	1018.5	1165.9	6.7	41.7	54.5	27.6	49.6	9.2	9.0	9.0	41.2	40.8	1.0	
30-Jan-22	Average	12.1	2.5	66.3	960.2	1069.8	6.6	31.8	54.4	22.7	42.7	8.2	7.8	7.8	44.0	42.8	0.0	Normal(On)
	Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Max.	14.1	606.6	184.4	1038.3	1161.6	6.6	37.6	54.5	26.5	46.7	9.9	8.0	8.0	44.3	43.1	0.0	
31-Jan-22	Average	11.8	3.3	54.0	945.3	1071.7	6.6	29.4	54.4	25.0	42.8	7.6	7.6	7.9	44.2	42.7	0.0	Normal(On)
	Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Max.	14.0	583.2	186.0	987.5	1093.3	6.6	34.5	54.5	28.7	46.4	8.0	8.1	8.0	44.3	42.9	0.0	



January 2022 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
1/1/2022	0	354.8	131.9	79.8	0	0	0	0	141	260.5	464.3	520.1	502.1	503.7	501.5	501.1	508	506.1	352.2	0	314	0	333.6	0	5974.7	203808
1/2/2022	611.3	593.7	605.4	608.4	503.5	510	0	451.4	442.9	464.1	459	451	475.5	452	458.2	453	454.5	413.8	51.3	471	450.2	460.3	0	149.6	9990.1	
1/3/2022	452.6	516.2	515.2	520.9	511.6	505.8	151.2	264.4	390.6	495.2	452.8	481.4	494.4	482.3	460.2	455.6	467.1	497.6	92.2	505	519	508.6	205.4	0	9945.3	
1/4/2022	504.7	501.3	502.9	442.7	549.5	502.6	412.9	456.2	469.8	459.7	468.1	466	453	455.9	455.5	453.4	459.2	422.2	113	0	0	0	0	0	8548.6	
1/5/2022	0	0	508.6	496.2	331.1	225.4	0	491.4	500.6	516.3	502.3	501.5	508.1	458.1	455.3	519.9	403.8	0	20.4	0	518.4	493.5	287.3	0	7738.2	
1/6/2022	506.7	487.5	509.9	459.8	84	508.3	426.9	388.8	482.7	375.8	460.8	549.8	505	501.3	409.9	504.3	501.2	505.7	108.1	506.7	518	513.8	106.2	0	9921.2	
1/7/2022	503.1	0	507	178.5	502.5	512.1	189	477.7	491.6	500.4	500	503.7	505.6	483.9	480.7	500.3	450.4	440.7	106.9	504.5	502.4	501.6	508.3	0	9850.9	
1/8/2022	523.3	515.5	174	506.3	520.4	528.8	505.7	468.2	467.7	466.9	411.6	468	463.9	483.1	463.5	456.6	453.4	502.3	61.2	510.9	501.5	408.8	0	0	9861.6	
1/9/2022	517.8	0	0	502.2	505	502.6	0	0	0	0	509.2	513.8	515.2	512.5	340.7	218.4	500.3	275.6	128.2	263.9	459	304.4	400.8	465.6	7435.2	
1/10/2022	505.1	519	590.8	495.4	0	0	0	0	0	0	0	0	0	0	30.2	504	500.2	565.4	503.2	239.2	476.9	449.1	288.8	179	5846.3	
1/11/2022	524.1	144.1	548.7	426	505.7	512.2	211	463.2	453.8	494.7	479.1	469.5	247.2	0	0	0	0	0	0	0	0	0	0	0	0	5479.3
1/12/2022	0	509.9	124.6	511.4	503.6	508.5	500.4	463.5	452.1	207.4	0	0	0	500	499.8	503.1	505.8	498.6	269.6	499.2	501.7	602.3	629.7	114.4	8905.6	
1/13/2022	500.4	502.6	510.2	509.5	509.8	500.5	230	507.9	504	0	0	0	0	0	0	16.2	0	0	0	0	0	0	0	0	0	4291.1
1/14/2022	0	0	652.9	527	607.4	514.9	306.6	500.6	501.2	502.4	504.7	503.4	505.2	500.9	516.2	566.4	504.3	516	206.7	524.9	502.2	536	0	0	9999.9	
1/15/2022	512.2	503.4	543.1	239.9	655.2	558.5	245.3	450.6	513.5	494.2	495.1	492.3	492.7	492.7	498.7	502.9	456.9	502.2	103	500.6	499.6	136	0	0	9888.6	
1/16/2022	505.7	504.9	511.6	504.6	0	498.6	505	459.2	465.4	496.7	466.8	478.5	488.4	453.5	484	493.6	507	401.8	28.9	503.4	513.9	533.6	98	0	9903.1	
1/17/2022	508	501.3	506	505	417	312.7	255	456.6	455.8	0	0	0	0	0	0	0	0	0	0	0	0	0	115.8	305.8	4339	
1/18/2022	529.6	517.8	503.3	458.3	589.5	442	291.7	503.7	511.6	505.4	468.8	332.4	0	522.8	528.9	549.3	550	513.4	186.7	408.8	586.6	499	0	0	9999.6	
1/19/2022	529.7	0	305	0	261	311.6	0	502.2	615.8	601.6	621.2	605.2	623.6	608.2	621.2	602.1	628.2	660.7	505.2	501.4	522.1	176.8	113	0	9915.8	
1/20/2022	498.7	491.1	439.2	473	498.9	508	211.2	455.5	487.8	481.1	450.3	451.7	452.6	450.9	450.8	452.9	455.5	400.2	102.6	500.4	0	0	498.4	0	9210.8	
1/21/2022	0	499.8	406.9	497.8	121.4	0	0	0	0	0	0	0	0	0	0	405.3	0	604.8	306.9	435.2	313.8	395.1	475.4	0	4462.4	
1/22/2022	501.8	502	203	503.5	302	404.4	154.4	505.8	551.3	500.8	508.6	0	0	0	0	513	361.9	230	282.2	532.1	506.6	500.2	527.6	503.2	8594.4	
1/23/2022	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1/24/2022	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1/25/2022	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1/26/2022	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1/27/2022	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1/28/2022	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1/29/2022	0	0	0	0	0	0	0	0	0	0	381.8	504.4	501.8	504.9	500.9	500.4	501	504.6	649.3	0	0	317.9	0	149.5	5016.5	
1/30/2022	313.3	446.9	523.5	481.7	424	461.7	223.8	504.3	438.7	508.4	504.5	505.7	466.9	494.3	500.3	501.7	486.8	408.5	106.7	501.6	490.5	147.8	274.6	0	9716.2	
1/31/2022	515	501.6	405.8	303.1	102.3	495.8	116.7	409.7	516.1	510.3	404.6	379.1	498.8	450.2	455.4	458.3	500.7	405.8	180.7	474.9	342.7	200.6	344.9	0	8973.1	



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
1/13/2022 5:56	0	87.5	0	44	779	73.5	0	8.08	0	0	0	0	0	0	0	0	
1/13/2022 5:58	0	87.5	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
1/14/2022 9:37	0	87.5	0	0	779	0	0	8.08	0	0	0	-1	-0.1	0	0	0	
1/14/2022 9:41	92	90.4	0.1599998	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
1/14/2022 9:45	0	90.4	0	779	779	0	0	8.08	0	0	0	0	0	0	0	0	
1/14/2022 9:48	0	90.4	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
1/17/2022 3:57	0	90.4	0	0	779	0	0	8.08	0	3	1	44	8.4	11.4	0	11.4	
1/17/2022 4:01	4	90.4	8.64	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
1/17/2022 4:04	0	90.4	0	57	779	72.2	0	8.08	0	0	0	0	0	0	0	0	
1/17/2022 4:07	0	90.4	0	0	779	0	9.6	8.08	1.52	0	0	0	0	0	0	0	
1/18/2022 16:06	0	90.4	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
1/18/2022 16:10	91	90.4	6.00E-02	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
1/18/2022 16:14	0	90.4	0	780	779	0.1	0	8.08	0	0	0	0	0	0	0	0	
1/18/2022 16:17	0	90.4	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
1/21/2022 5:09	0	90.4	0	0	779	0	0	8.08	0	0	0	135	13.5	11	0	11	
1/21/2022 5:12	0	90.4	9.04	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
1/21/2022 5:17	0	90.4	0	148	779	63.1	0	8.08	0	0	0	0	0	0	0	0	
1/21/2022 5:19	0	90.4	0	0	779	0	13.7	8.08	5.62	0	0	0	0	0	0	0	
1/22/2022 4:17	0	90.4	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
1/22/2022 4:20	90	90.4	4.00E-02	0	779	0	0	8.08	0	0	0	0	4.0	0	0	0	
1/22/2022 4:23	0	90.4	0	773	779	0.6	0	8.08	0	0	0	0	0	0	0	0	
1/22/2022 4:25	0	90.4	0	0	779	0	8.3	8.08	0.2200003	0	0	0	0	0	0	0	
1/25/2022 13:31	0	90.4	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
1/25/2022 13:36	0	90.4	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
1/25/2022 15:06	0	90.4	0	0	779	0	0	8.08	0	0	0	0	0	0.1	0	0.1	
1/25/2022 15:10	92	90.4	0.1599998	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
1/25/2022 15:13	0	90.4	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
1/25/2022 15:21	0	90.4	0	787	779	0.8	0	8.08	0	0	0	0	0	0	0	0	
1/29/2022 22:30	0	90.4	0	0	779	0	0	8.08	0	1	0.3333333	0	0	-0.1	0	0.1	
1/29/2022 22:33	93	90.4	0.2599998	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
1/29/2022 22:36	0	90.4	0	768	779	1.1	0	8.08	0	0	0	0	0	0	0	0	
1/29/2022 22:39	0	90.4	0	0	779	0	7.8	8.08	0.2799997	0	0	0	0	0	0	0	
1/30/2022 9:49	0	90.4	0	0	779	0	0	8.08	0	0	0	0	0	-0.1	0	0.1	
1/30/2022 9:52	92	90.4	0.1599998	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
1/30/2022 9:55	0	90.4	0	784	779	0.5	0	8.08	0	0	0	0	0	0	0	0	
1/30/2022 9:59	0	90.4	0	0	779	0	8.1	8.08	2.00E-02	0	0	0	0	0	0	0	
1/3/2022 0:25	0	87.5	0	0	779	0	0	8.08	0	0	0	0	0	-0.1	0	0.1	
1/3/2022 0:28	0	87.5	0	52	779	72.7	0	8.08	0	0	0	0	0	0	0	0	
1/3/2022 0:31	0	87.5	0	0	779	0	8.2	8.08	0.1199999	0	0	0	0	0	0	0	
1/5/2022 10:19	0	87.5	0	0	779	0	0	8.08	0	1	0.3333333	-1	-0.1	0	0	0	
1/5/2022 10:22	46	87.5	4.15	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
1/5/2022 10:28	0	87.5	0	0	779	0	0	8.08	0	1	0.3333333	0	0	0	0	0	
1/13/2022 5:48	0	87.5	0	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
1/13/2022 5:52	0	87.5	8.75	0	779	0	0	8.08	0	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
1/1/2022	0:40	0:43	0:03	Normal	7.3	Low O2 levels caused by CO spike.	Incinerator went into feeder lockout until the O2 levels returned to the normal operating range.
1/1/2022	1:36	1:40	0:04	Normal	7.4	Low O2 levels caused by CO spike.	Incinerator went into feeder lockout until the O2 levels returned to the normal operating range.
1/1/2022	1:54	2:03	0:09	Normal	6.6	Low O2 levels caused by CO spike.	Incinerator went into feeder lockout until the O2 levels returned to the normal operating range.
1/13/2022	11:13	11:19	0:06	Normal	6.8	Low O2 levels caused by CO spike.	Incinerator went into feeder lockout until the O2 levels returned to the normal operating range.
1/13/2022	11:44	11:47	0:03	Normal	6.9	Low O2 levels caused by CO spike.	Incinerator went into feeder lockout until the 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% O2	as mg/m ³	Explanation	Taken
1/4/2022	19:00	20:00	1:00	Normal	8.01	9.2	CO spikes occurred after the operator charged waste into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
1/13/2022	13:00	0:00	11:00	Normal	11.83	13.7	CO spikes occurred as the operations team cycled the rams and a large ash rock fell into the ash quench pit	The operator reduced his feed rate until the CO levels returned to the normal operating range.
1/21/2022	6:00	9:00	3:00	Normal	8.2	9.5	CO spikes occurred as the operations team cycled the rams and a large ash rock fell into the ash quench pit	The operator reduced his feed rate until the CO 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
1/1/2022	2:00	5:00	3:00	Normal	16.34	18.9	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
1/3/2022	17:01	19:00	1:59	Normal	8.4	9.7	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
1/4/2022	16:00	18:00	2:00	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.
1/4/2022	19:00	23:00	4:00	Normal	12.1	14.0	CO spikes occurred after the operator charged waste into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
1/5/2022	22:00	1:00	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.
1/6/2022	14:00	17:00	3:00	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.
1/9/2022	21:00	1:00	4:00	Normal	12.8	14.8	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
1/13/2022	5:00	16:00	11:00	Normal	15.4	17.8	CO spikes occurred as the operations team cycled the rams and a large ash rock fell into the ash quench pit	The operator reduced his feed rate until the CO levels returned to the normal operating range.
1/16/2022	17:00	20:00	3:00	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.
1/17/2022	10:00	14:00	4:00	Normal	14.5	16.7	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

1/19/2022	10:00	12:00	2:00	Normal	8.4	9.7	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
1/20/2022	22:00	1:00	3:00	Normal	11.3	13.0	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
1/21/2022	5:00	8:00	3:00	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.
1/22/2022	3:00	7:00	4:00	Normal	10.2	11.8	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
1/22/2022	11:00	15:00	4:00	Normal	8.6	9.9	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
1/22/2022	19:00	21:00	2:00	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.
1/31/2022	10:00	13:00	3:00	Normal	11.4	13.2	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.

Oxides of Nitrogen > 98ppm 24 hr average

	Start	Stop		Op.	Stack NOx	Stack NOx		Actions
Date	Time	Time	Duration	Mode	@ 11% O2	as mg/m ³	Explanation	Taken
1/11/2022	13:00	23:00	10:00	Normal	106.09	191.0	High NOx levels caused by frozen ammonia line.	Stericycle maintenance thawed ammonia feed line for the SNCR.
			0:00					

Secondary Chamber Temperature < 1000°C

Date	Start Time	Stop Time	Duration	Op. Mode	Temp. °C	Explanation	Actions Taken
1/1/2022	0:00	0:37	0:37	Normal	943	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.
1/1/2022	18:57	19:58	1:01	Normal	985	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.
1/6/2022	23:40	0:59	1:19	Normal	982	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.
1/7/2022	1:15	1:50	0:35	Normal	990	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.
1/8/2022	23:54	0:42	0:48	Normal	991	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.
1/10/2022	4:31	7:34	3:03	Shut-Down	973	Low upper chamber temperature was caused by a high flame port air setting during shut-down.	No waste was fed during this period. The incinerator was brought to a controlled shut-down.

1/17/2022	16:22	16:54	0:32	Normal	992	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.
1/17/2022	18:51	22:25	3:34	Normal	980	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.
1/17/2022	20:38	23:35	2:57	Normal	963	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.
1/23/2022	1:37	4:09	2:32	Shut-Down	934	Low upper chamber temperature was caused by a high flame port air setting during shut-down.	No waste was fed during this period. The incinerator was brought to a controlled shut-down.



February 2022 Incinerator Averages and Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp	SecTemp	SNCR	DemTemp	CarbTemp	DiffTemp	IDFanTemp	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	OpMode
1-Feb-22	Average	12.0	5.7	39.9	912.0	1064.1	6.6	26.1	54.4	28.2	42.9	8.4	7.7	7.8	43.0	42.1	0.0	Normal(On)
	Min	9.1	0.0	12.9	822.9	1010.6	6.6	23.0	54.0	22.5	41.3	7.5	7.3	7.6	41.9	41.5	0.0	
	Max	14.7	856.8	118.6	959.9	1094.2	6.6	31.9	54.5	31.4	46.2	8.9	8.3	8.1	44.3	42.6	0.0	
2-Feb-22	Average	11.9	4.1	63.1	928.0	1077.8	6.6	29.9	54.5	24.5	45.4	8.2	7.5	7.5	42.0	41.5	0.1	Normal(On)
	Min	9.6	0.0	26.0	908.8	1044.3	6.6	24.2	54.3	16.4	41.7	7.9	7.1	7.2	41.6	41.3	0.0	
	Max	14.5	877.0	138.2	966.7	1110.8	6.7	38.5	55.1	30.3	49.4	8.4	7.8	8.8	42.3	41.8	1.0	
3-Feb-22	Average	12.4	3.5	60.8	930.5	1080.8	6.6	34.8	54.5	19.7	45.0	7.7	7.6	7.4	43.5	43.6	0.0	Normal(On)
	Min	10.1	0.0	21.2	915.1	1051.7	6.6	27.9	54.4	15.9	40.5	7.5	7.3	7.2	41.9	41.4	0.0	
	Max	13.6	528.0	145.7	968.7	1112.4	6.6	38.7	54.6	26.6	47.6	8.0	8.0	7.6	44.8	45.3	0.0	
4-Feb-22	Average	12.8	3.4	73.0	800.9	1026.0	6.5	30.6	39.7	9.1	35.1	7.7	8.4	8.2	43.0	43.5	0.0	Normal(On)/Shut-down/Off/Start-up/Normal(ON)
	Min	8.2	0.0	0.0	434.4	599.2	4.7	13.8	24.4	-2.5	7.2	7.3	7.5	7.4	40.4	40.6	0.0	
	Max	20.4	698.3	184.6	934.8	1091.7	6.6	40.3	54.7	26.8	46.0	9.4	10.7	9.4	44.5	45.2	0.0	
5-Feb-22	Average	12.8	14.4	41.3	874.3	1028.7	6.6	29.6	54.4	24.8	40.2	7.6	8.2	7.8	40.7	40.6	0.0	Normal(ON)
	Min	7.8	0.0	13.2	683.4	843.0	6.6	23.0	54.3	16.4	35.9	7.3	7.8	7.4	40.5	40.3	0.0	
	Max	17.0	1916.2	176.0	947.6	1092.4	6.6	38.1	54.6	31.5	44.7	8.2	8.9	9.1	40.8	40.8	0.0	
6-Feb-22	Average	14.1	11.5	47.0	668.7	960.4	6.6	27.4	54.4	27.0	44.3	8.0	8.6	7.9	40.6	40.4	0.0	Normal(ON)
	Min	8.1	0.0	-0.4	424.2	857.9	6.6	23.8	54.4	21.1	40.9	7.4	7.9	7.6	40.4	40.3	0.0	
	Max	17.4	2872.1	195.6	950.1	1078.9	6.6	33.4	54.5	30.7	48.0	8.3	8.9	8.3	40.8	40.6	0.0	
7-Feb-22	Average	12.5	4.4	41.6	814.3	1041.3	6.6	31.4	54.7	23.2	47.6	8.1	8.4	7.8	40.6	40.6	0.0	Normal(ON)
	Min	7.4	0.0	9.8	688.5	878.8	6.6	25.1	54.2	9.6	44.1	7.3	7.9	7.5	40.5	40.4	0.0	
	Max	17.6	770.6	122.5	927.0	1113.2	6.6	46.4	56.1	29.3	56.8	9.3	8.8	8.0	40.8	40.8	0.0	
8-Feb-22	Average	12.1	1.3	64.7	934.7	1077.5	5.8	38.9	54.3	15.4	44.7	7.5	7.9	7.5	42.0	42.1	0.0	Normal(ON)
	Min	9.1	0.0	24.6	911.8	1052.9	5.0	29.7	49.9	9.1	39.1	7.3	7.5	7.3	40.5	40.5	0.0	
	Max	15.7	489.2	149.3	955.0	1116.7	6.6	46.9	56.2	20.5	53.3	7.8	8.2	7.7	43.2	43.2	0.0	
9-Feb-22	Average	11.9	2.7	51.0	950.9	1078.1	5.0	35.2	54.5	19.3	45.1	7.9	8.0	7.3	43.2	43.1	0.0	Normal(ON)
	Min	10.2	0.0	19.0	941.1	1060.7	5.0	27.4	53.6	11.7	40.6	7.5	7.9	7.1	42.9	42.7	0.0	
	Max	13.4	729.0	138.7	968.1	1117.5	5.1	44.1	56.0	26.6	51.0	9.4	8.1	7.7	43.7	43.5	0.0	
10-Feb-22	Average	12.5	2.1	55.6	901.3	1064.3	5.0	37.3	54.6	17.3	42.3	7.6	8.0	7.4	44.2	43.6	0.1	Normal(ON)/Shut-down/Off/Start-up/Normal(ON)
	Min	8.6	0.0	0.0	603.2	517.9	5.0	21.4	52.7	7.1	33.7	7.4	7.8	7.2	43.3	43.3	0.0	
	Max	20.4	838.0	128.1	949.6	1125.8	5.0	48.7	55.8	31.5	48.6	7.9	8.7	8.0	44.7	43.8	1.0	
11-Feb-22	Average	14.7	37.2	46.2	723.9	842.1	5.0	30.4	45.8	15.4	33.1	7.8	8.4	7.6	33.6	32.0	0.0	Normal(ON)/Shut-down/Off/Start-up/Normal(ON)
	Min	3.0	0.0	0.0	392.5	395.6	4.9	11.0	25.5	-31.1	6.9	7.4	7.7	7.3	0.1	0.0	0.0	
	Max	20.4	2800.6	130.9	957.0	1109.4	5.3	61.8	57.6	34.7	46.5	8.9	9.0	9.9	44.5	43.8	0.0	
12-Feb-22	Average	11.7	4.2	62.8	927.2	1077.6	5.0	23.7	49.7	26.0	40.4	7.6	7.7	7.8	43.6	41.4	0.0	Normal(ON)
	Min	8.9	0.0	20.1	821.1	1015.6	5.0	18.5	48.1	22.9	34.5	7.3	7.5	7.6	43.4	41.1	0.0	
	Max	13.5	891.5	141.1	974.0	1115.9	5.2	29.1	52.2	30.0	43.3	7.7	7.9	7.9	43.7	41.6	0.0	
13-Feb-22	Average	12.1	1.8	53.8	959.4	1061.5	5.0	19.4	41.5	22.1	36.2	7.8	7.3	7.8	43.8	41.5	0.1	Normal(ON)
	Min	8.8	0.0	21.2	790.8	1005.9	5.0	14.7	13.2	-1.6	21.6	7.2	7.1	7.7	43.6	41.3	0.0	
	Max	15.2	642.1	136.1	1010.1	1117.8	5.0	27.7	51.2	33.1	42.9	8.8	7.7	7.9	44.0	41.7	1.0	
14-Feb-22	Average	12.0	1.4	47.3	900.4	1060.3	5.0	18.6	41.7	23.1	32.8	8.1	7.5	7.8	43.8	41.7	0.0	Normal(ON)
	Min	8.1	0.0	19.1	612.0	1022.9	5.0	14.7	13.1	-1.9	21.3	7.7	7.1	7.6	43.6	41.4	0.0	
	Max	15.1	642.7	167.3	1002.0	1116.1	5.0	23.1	48.2	32.4	36.6	9.0	7.7	7.9	44.2	42.0	0.0	
15-Feb-22	Average	12.7	5.1	43.0	862.4	1070.6	5.0	24.7	49.2	24.5	39.7	7.9	7.6	7.6	43.5	41.3	0.2	Normal(ON)
	Min	8.8	0.0	9.3	592.8	1038.5	5.0	16.6	35.5	5.9	36.4	7.3	7.2	7.2	41.6	39.7	0.0	
	Max	14.9	815.0	121.2	984.7	1124.6	5.0	36.1	54.4	34.0	46.7	8.2	7.9	8.0	44.2	42.0	1.0	
16-Feb-22	Average	11.9	2.6	63.1	939.8	1083.2	5.1	30.8	53.1	22.4	44.8	7.8	7.3	7.8	43.0	41.2	0.2	Normal(ON)
	Min	9.7	0.0	13.7	897.4	1042.1	5.0	23.9	50.4	15.8	39.7	7.3	7.2	7.7	41.6	40.4	0.0	
	Max	13.3	406.1	173.2	952.8	1121.2	5.7	38.6	54.5	26.7	49.0	8.3	7.6	8.0	43.9	41.8	1.0	
17-Feb-22	Average	11.9	3.5	51.2	946.3	1075.0	5.2	23.2	43.3	20.1	37.4	7.3	7.3	7.9	41.4	40.3	0.0	Normal(ON)
	Min	9.8	0.0	6.1	915.6	1020.0	5.0	15.2	16.0	-2.0	27.0	7.2	7.1	7.8	41.2	40.2	0.0	
	Max	14.4	711.5	148.8	983.5	1136.5	5.7	32.1	53.5	28.4	46.5	7.8	7.5	8.1	41.6	40.5	1.0	
TheDate		OX6min	COmin	NOXmin	PrimTemp	SecTemp	SNCR	DemTemp	CarbTemp	DiffTemp	IDFanTemp	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	OpMode

February 2022 Incinerator Averages and Ranges

18-Feb-22	Average	12.4	1.6	87.5	943.8	1076.9	5.0	23.5	48.7	25.2	39.7	7.3	7.3	7.9	41.4	40.4	0.4	Normal(ON)/Shut-down
	Min	10.8	0.0	22.2	926.5	973.4	5.0	18.3	46.5	21.8	36.3	7.2	7.1	7.7	41.3	40.3	0.0	
	Max	15.1	507.5	212.1	961.3	1126.9	5.0	28.3	50.4	29.2	42.5	7.6	7.6	8.0	41.5	40.7	1.0	
19-Feb-22	Average	15.8	2.1	21.7	617.9	722.2	5.1	42.0	41.0	-1.0	25.1	7.7	7.9	8.6	24.0	23.5	0.0	Shut-down/Off/Start-up
	Min	0.0	0.0	0.0	-17.8	-17.8	0.0	-17.8	-17.8	-45.9	-17.8	0.0	0.0	0.0	0.0	0.0	0.0	
	Max	20.4	687.3	83.1	946.7	1087.2	5.8	80.5	48.1	31.8	38.6	7.9	8.9	11.2	41.8	41.4	1.0	
20-Feb-22	Average	12.0	1.9	69.0	925.1	1071.6	5.0	20.2	47.9	27.7	39.3	7.8	7.7	7.5	41.2	41.1	0.4	Start-up/Normal(ON)
	Min	9.4	0.0	15.9	841.4	1040.2	5.0	15.7	46.9	23.0	37.4	7.7	7.3	7.3	41.0	41.0	0.0	
	Max	14.5	795.3	176.0	955.5	1114.9	5.1	27.0	50.3	31.8	43.2	7.9	7.9	7.6	41.4	41.4	1.0	
21-Feb-22	Average	11.8	1.8	81.2	949.1	1062.6	5.0	18.6	48.0	29.4	40.0	7.7	7.6	7.5	41.0	41.2	0.2	Normal(ON)
	Min	8.7	0.0	37.2	935.9	1026.3	5.0	16.2	47.4	26.6	38.4	7.4	7.3	7.4	40.6	40.9	0.0	
	Max	13.4	664.2	169.1	959.4	1093.3	5.1	21.8	48.8	32.7	41.2	7.8	7.9	7.6	41.4	41.5	1.0	
22-Feb-22	Average	11.7	0.2	84.6	937.7	1064.0	5.1	19.1	47.9	28.8	40.4	7.8	7.7	7.7	42.7	42.2	0.5	Normal(ON)
	Min	9.4	0.0	40.5	927.9	1010.2	5.0	16.7	47.3	25.9	38.6	7.6	7.4	7.5	40.8	41.1	0.0	
	Max	13.9	152.4	390.0	946.8	1106.9	5.5	22.6	49.4	31.1	41.5	8.0	7.8	8.0	43.8	43.0	1.0	
23-Feb-22	Average	12.2	1.9	85.7	928.3	1063.8	5.1	20.1	48.4	28.3	39.7	7.8	7.7	7.7	43.6	42.8	0.6	Normal(ON)
	Min	8.7	0.0	1.1	811.6	1019.1	5.0	15.5	47.1	23.2	38.0	7.6	7.1	7.6	42.7	42.6	0.0	
	Max	14.8	388.6	369.6	977.2	1113.1	5.8	25.4	51.4	33.0	43.3	8.1	7.9	8.0	43.9	43.0	1.0	
24-Feb-22	Average	12.3	2.7	63.7	936.8	1062.2	5.0	21.0	48.4	27.4	39.3	7.7	7.6	7.5	43.0	42.7	0.8	Normal(ON)
	Min	10.0	0.0	19.4	845.5	1031.1	5.0	16.5	47.2	24.7	37.9	7.5	7.2	7.5	42.8	42.4	0.0	
	Max	14.4	596.7	201.4	972.3	1093.6	5.0	24.8	49.5	32.6	41.1	8.1	7.8	7.6	43.4	43.0	1.0	
25-Feb-22	Average	12.1	2.0	59.2	955.0	1070.0	5.0	22.6	49.0	26.4	40.6	7.6	7.7	7.5	43.1	42.6	0.9	Normal(ON)
	Min	9.4	0.1	5.8	936.1	1024.9	5.0	18.7	48.1	22.7	38.5	7.3	7.3	7.3	42.9	42.3	0.0	
	Max	13.6	257.9	164.4	979.3	1107.1	5.0	27.3	50.6	29.9	42.7	8.4	8.0	7.6	43.3	42.9	1.0	
26-Feb-22	Average	12.3	3.8	52.6	957.6	1072.8	5.0	22.3	48.6	26.3	39.7	8.8	7.6	7.5	42.8	42.2	1.0	Normal(ON)
	Min	10.5	0.0	1.6	942.7	1042.2	5.0	18.6	47.8	23.8	37.7	8.0	7.3	7.4	42.4	42.1	0.0	
	Max	13.5	552.8	227.8	986.1	1107.2	5.0	24.7	49.2	29.8	41.6	9.2	7.9	7.7	42.9	42.4	1.0	
27-Feb-22	Average	12.0	2.1	57.4	951.9	1072.0	5.0	22.5	48.9	26.4	39.7	7.8	7.8	7.3	42.6	42.3	1.0	Normal(ON)
	Min	10.2	0.0	6.1	936.6	1022.3	5.0	19.1	48.1	24.7	38.4	7.5	7.5	7.1	42.4	42.0	1.0	
	Max	13.3	311.8	177.2	991.1	1112.0	5.0	25.1	49.9	29.6	40.7	9.0	8.2	7.8	42.7	42.5	1.0	
28-Feb-22	Average	12.1	4.3	52.4	969.4	1070.6	5.0	22.0	47.9	25.9	39.1	7.9	8.1	7.4	42.6	42.5	1.0	Normal(ON)
	Min	9.8	0.0	3.8	938.2	1015.5	5.0	18.5	45.6	22.7	37.8	7.5	7.5	7.0	42.3	42.3	1.0	
	Max	13.4	599.6	199.3	1010.6	1118.9	5.0	26.8	49.6	29.9	41.7	8.7	8.5	8.2	43.0	42.6	1.0	

February 2022 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	Mohtly Total
01-Feb-22	495.70	383.20	495.00	499.00	153.80	471.90	0.00	507.60	508.10	475.80	39.60	0.00	0.00	0.00	0.00	0.00	211.90	148.70	8.20	57.10	175.00	622.30	571.90	488.20	6313.0	213959
02-Feb-22	505.00	502.50	538.40	503.20	501.20	506.40	505.40	0.00	460.10	502.70	332.10	473.00	529.00	0.00	353.10	608.30	607.00	281.50	5.80	278.60	505.50	371.80	554.40	568.60	9993.6	
03-Feb-22	621.70	502.30	112.30	456.80	335.10	455.40	456.00	500.80	335.40	0.00	85.40	521.60	503.40	531.20	550.20	535.10	504.30	526.50	39.20	359.00	511.80	487.80	475.40	589.00	9995.7	
04-Feb-22	507.10	494.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	268.20	508.20	502.10	401.90	499.50	661.10	3842.4	
05-Feb-22	285.10	271.20	505.80	142.90	0.00	0.00	0.00	123.00	333.70	234.30	513.10	508.20	532.70	552.10	510.70	321.10	507.10	413.60	117.80	0.00	0.00	0.00	0.00	0.00	5872.4	
06-Feb-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	515.80	503.60	126.10	151.10	305.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1602.0	
07-Feb-22	0.00	0.00	0.00	0.00	305.90	0.00	407.30	322.80	32.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	527.70	530.60	517.40	224.90	265.20	340.60	500.60	254.60	4229.7	
08-Feb-22	87.90	617.70	636.80	659.20	245.90	295.40	234.80	458.80	175.90	412.90	512.30	268.00	500.30	516.40	501.00	530.90	502.00	505.20	183.20	499.20	355.40	439.00	509.60	0.00	9647.8	
09-Feb-22	503.10	499.40	131.00	410.20	499.90	240.00	67.10	450.50	405.20	460.40	501.90	450.10	481.40	485.50	480.50	470.40	484.90	456.60	154.30	293.60	472.50	271.40	81.20	301.00	9052.1	
10-Feb-22	502.20	502.50	547.30	506.20	507.60	506.20	204.00	502.80	505.50	522.30	456.90	158.90	609.10	601.10	260.80	0.00	0.00	0.00	0.00	0.00	71.00	273.40	506.00	446.20	8190.0	
11-Feb-22	458.60	533.90	515.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	162.10	517.90	516.20	627.70	3331.7	
12-Feb-22	509.30	518.50	576.60	317.00	491.30	566.00	437.40	505.80	458.60	482.40	468.00	475.00	497.30	458.30	478.70	313.40	342.70	322.00	347.00	494.20	346.60	500.40	93.50	0.00	10000.0	
13-Feb-22	503.30	500.60	503.50	503.70	500.90	0.00	36.70	455.60	457.30	460.50	478.80	458.00	457.90	463.80	467.20	461.50	462.90	473.80	174.20	0.00	0.00	0.00	0.00	0.00	7820.2	
14-Feb-22	0.00	0.00	228.40	510.60	232.30	476.20	92.20	506.90	501.50	467.30	464.80	476.30	497.80	338.40	463.00	462.21	145.20	413.80	0.00	108.60	507.40	612.30	580.10	43.20	8128.5	
15-Feb-22	666.60	232.20	641.60	467.40	506.70	527.60	251.80	355.40	502.20	509.10	12.70	510.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	317.80	139.80	508.70	6149.6	
16-Feb-22	572.60	505.50	615.40	566.80	227.40	331.70	246.90	239.20	521.10	504.80	207.10	513.90	516.40	165.70	349.10	503.90	510.60	313.80	5.50	502.00	510.10	502.70	602.00	223.40	9757.6	
17-Feb-22	571.50	503.40	290.80	0.00	0.00	0.00	0.00	490.20	471.20	481.30	477.80	474.00	484.20	482.00	484.80	485.30	483.10	439.20	0.00	501.30	463.00	336.80	502.20	128.00	8550.1	
18-Feb-22	497.70	512.80	291.40	505.00	499.90	501.00	211.80	470.50	474.60	477.60	474.40	471.40	473.60	300.60	476.40	471.10	474.70	475.00	151.00	0.00	0.00	0.00	0.00	0.00	8210.5	
19-Feb-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	252.50	0.00	0.00	0.00	2.30	0.00	185.60	0.00	319.10	506.00	480.80	54.00	517.20	2317.5	
20-Feb-22	487.30	500.70	468.50	486.40	484.40	496.20	247.40	513.90	136.90	0.00	0.00	477.30	534.10	500.10	474.00	488.50	516.60	504.70	356.00	255.40	162.70	236.60	146.80	259.00	8733.5	
21-Feb-22	347.10	310.20	230.00	309.80	528.90	490.20	517.50	344.30	216.30	312.10	306.10	307.20	117.40	310.00	324.40	344.40	304.70	308.50	336.60	19.80	467.10	134.80	471.60	132.90	7491.9	
22-Feb-22	350.60	401.60	345.40	561.30	266.10	380.00	186.80	301.90	317.40	374.50	326.80	384.40	307.90	388.60	388.70	353.90	250.30	368.70	111.20	474.10	476.00	485.10	473.60	502.80	8777.7	
23-Feb-22	488.00	0.00	482.80	485.00	484.80	0.00	503.00	465.60	450.10	452.70	402.60	200.50	0.00	0.00	0.00	0.00	455.50	455.50	224.30	493.60	497.40	497.10	499.80	494.20	8032.5	
24-Feb-22	495.30	492.20	491.80	493.10	500.50	494.40	0.00	513.60	507.10	36.20	0.00	0.00	509.10	150.00	514.00	516.80	521.00	350.10	320.90	507.70	384.00	0.00	510.60	312.20	8620.6	
25-Feb-22	504.40	471.60	530.20	494.30	531.60	367.80	0.00	326.30	547.10	524.10	534.30	19.00	501.40	434.40	502.40	79.40	511.20	507.50	117.80	510.90	502.00	504.60	525.10	0.00	9547.4	
26-Feb-22	508.60	501.80	305.00	360.80	504.60	500.40	186.00	452.30	397.30	489.30	457.80	454.50	474.80	450.80	466.00	454.00	424.20	455.10	157.20	496.20	495.90	495.10	313.10	0.00	9800.8	
27-Feb-22	510.70	507.30	506.60	509.40	509.30	507.90	507.20	630.40	268.10	454.20	477.20	455.50	480.10	399.20	465.40	409.70	519.30	308.60	161.00	412.00	485.00	424.10	42.20	0.00	9950.4	
28-Feb-22	503.90	504.50	505.30	405.60	503.90	503.90	516.40	161.00	333.00	78.00	466.10	452.10	451.10	450.40	454.30	453.30	455.50	451.70	73.20	462.70	463.30	471.90	412.00	466.90	10000.0	



February 2022 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
2/6/2022 13:39	0	90.4	0	0	779	0	0	8.08	0	0	0	-1	-0.1	-0.1	0	0.1	
2/6/2022 13:42	91	90.4	0.05999985	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
2/6/2022 13:45	0	90.4	0	778	779	0.1	0	8.08	0	0	0	0	0	0	0	0	
2/6/2022 13:48	0	90.4	0	0	779	0	8.2	8.08	0.1199999	0	0	0	0	0	0	0	
2/11/2022 19:58	0	90.4	0	0	779	0	0	8.08	0	0	0	-1	-0.1	-0.1	0	0.1	
2/11/2022 20:01	91	90.4	0.05999985	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
2/11/2022 20:06	0	90.4	0	779	779	0	0	8.08	0	0	0	0	0	0	0	0	
2/11/2022 20:09	0	90.4	0	0	779	0	8	8.08	0.07999992	0	0	0	0	0	0	0	
2/22/2022 21:13	0	90.4	0	779	779	0	0	8.08	0	0	0	0	0	0	0	0	
2/23/2022 1:48	0	90.4	0	0	779	0	0	8.08	0	1	0.3333333	-1	-0.1	-0.1	0	0.1	
2/23/2022 1:51	91	90.4	0.05999985	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
2/23/2022 1:55	0	90.4	0	779	779	0	0	8.08	0	0	0	0	0	0	0	0	
2/23/2022 1:58	0	90.4	0	0	779	0	8.2	8.08	0.1199999	0	0	0	0	0	0	0	
2/26/2022 23:12	0	90.4	0	0	779	0	0	8.08	0	0	0	-1	-0.1	-0.1	0	0.1	
2/26/2022 23:15	91	90.4	0.05999985	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
2/26/2022 23:18	0	90.4	0	779	779	0	0	8.08	0	0	0	0	0	0	0	0	
2/26/2022 23:21	0	90.4	0	0	779	0	8.1	8.08	0.02000046	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
2/7/2022	3:36	3:37	0:01	Normal	7.4	Low O2 levels caused by CO spike.	Incinerator went into feeder lockout until the 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% O2	as mg/m ³	Explanation	Taken
2/5/2022	7:00	9:00	2:00	Normal	8.2	9.5	CO spikes occurred as the operations team cycled the rams and a large ash rock fell into the ash quench pit	The operator reduced his feed rate until the CO levels returned to the normal operating range.
2/5/2022	19:00	8:00	13:00	Normal	21.35	24.6	High CO levels caused by failure of underfire air motor.	Maintenane replaced the underfire air motor. No waste was fed until the CO levels returned to the normal operating range.
2/6/2022	13:00	2:00	13:00	Normal	22.5	26.0	High CO levels were caused by a failure of the Flame Port Air Fan	Maintenace reset the flame port air fan. No waste was fed until CO levels returned to the normal operating range.
2/15/2022	12:00	20:00	8:00	Normal	8.6	9.9	High CO levels were caused by a failure of the internal ram hydraulic power pack.	The hydraulic power pack was replaced. No waste was fed until the CO 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
2/1/2022	11:00	17:00	6:00	Normal	11.6	13.4	A large CO spike occurred which took a long time to disipate through the averaging period.	Operator monitored the machine and slowed feeding as needed.
2/2/2022	3:00	4:00	1:00	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.
2/2/2022	16:00	17:00	1:00	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.
2/3/2022	19:00	20:00	1:00	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.
2/4/2022	22:00	4:00	6:00	Normal	11.9	13.7	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
2/5/2022	15:00	4:00	13:00	Normal	23.2	26.8	High CO levels caused by failure of underfire air motor.	Maintenane replaced the underfire air motor. No waste was fed until the CO levels returned to the normal operating range.
2/6/2022	10:00	19:00	9:00	Normal	33.6	38.8	High CO levels were caused by a failure of the Flame Port Air Fan	Maintenace reset the flame port air fan. No waste was fed until CO levels returned to the normal operating range.
2/7/2022	4:00	9:00	5:00	Normal	14	16.2	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
2/12/2022	18:00	22:00	4:00	Normal	13.2	15.2	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

2/15/2022	11:00	16:00	5:00	Normal	16	18.5	High CO levels were caused by a failure of the internal ram hydraulic power pack.	The hydraulic power pack was replaced. No waste was fed until the CO levels returned to the normal operating range.
2/17/2022	16:00	20:00	4:00	Normal	15	17.3	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
2/24/2022	14:00	18:00	4:00	Normal	9.2	10.6	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
2/26/2022	13:00	16:00	3:00	Normal	9	10.4	Series of small spikes caused by waste falling over inside 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
2/4/2022	8:38	12:03	3:25	Shut-Down	947	Low upper chamber temperature was caused by a high flame port air setting during shut-down.	No waste was fed during this period. The incinerator was brought to a controlled shut-down.
2/4/2022	23:44	0:57	1:13	Normal	905	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.
2/5/2022	4:20	7:46	3:26	Normal	954	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.
2/5/2022	23:24	9:38	10:14	Normal	937	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.
2/6/2022	11:43	12:23	0:40	Normal	957	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.
2/6/2022	13:12	22:08	8:56	Normal	957	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.

2/6/2022	22:21	23:21	1:00	Normal	985	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.
2/6/2022	23:56	0:50	0:54	Normal	987	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.
2/7/2022	1:04	2:51	1:47	Normal	978	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.
2/7/2022	2:29	3:33	1:04	Normal	972	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.
2/7/2022	4:29	5:02	0:33	Normal	970	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.
2/7/2022	8:59	9:32	0:33	Normal	953	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.
2/18/2022	23:25	0:30	1:05	Normal	977	Low upper chamber temperature was caused by a high flame port air setting during shut-down.	No waste was fed during this period. The incinerator was brought to a controlled shut-down.

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
2/13/2022	19:00	3:20	8:20	Normal	0.2	Low differential temperature was caused by a lack of re-heat steam due to a boiler malfunction.	No waste was fed until the differential temperature returned to the normal operating range.
2/17/2022	2:19	6:39	4:20	Normal	1.8	Low differential temperature was caused by a lack of re-heat steam due to a boiler malfunction.	No waste was fed until the differential temperature returned to the normal operating range.



March 2022 Incinerator Averages Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp	SecTemp	SNCR	DemTemp	CarbTemp	DiffTemp	IDFanTemp	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	OpMode
1-Mar-22	Average	11.8	2.7	61.2	974.4	1066.8	5.0	22.9	48.9	26.0	39.8	8.5	8.0	7.3	42.6	42.2	1.0	Normal(On)
	Min	10.2	0.0	6.6	953.0	1023.9	5.0	20.3	47.3	24.5	38.1	7.4	7.6	7.1	42.5	41.9	1.0	
	Max	13.1	619.9	190.6	997.4	1107.6	5.2	26.0	50.9	27.8	41.4	9.0	8.3	7.6	42.8	42.5	1.0	
2-Mar-22	Average	11.9	3.6	53.0	961.7	1072.7	5.0	23.1	48.5	25.4	39.3	8.1	7.8	7.3	42.9	42.6	1.0	Normal(On)
	Min	10.7	0.0	6.1	941.7	1024.9	5.0	21.4	47.3	23.6	37.3	7.7	7.4	7.1	42.7	42.3	1.0	
	Max	13.3	724.9	201.1	982.4	1101.4	5.0	26.2	49.8	26.8	41.6	8.4	8.0	7.4	43.1	42.8	1.0	
3-Mar-22	Average	12.0	4.9	78.0	922.7	1068.2	5.0	19.6	48.5	28.8	39.4	8.3	7.9	7.2	43.1	42.6	0.8	Normal(On)
	Min	9.5	0.0	-0.6	766.2	1031.1	5.0	14.9	46.7	24.9	38.2	7.9	7.0	7.0	42.7	42.3	0.0	
	Max	15.1	729.6	226.2	967.5	1122.1	5.0	24.7	49.9	35.0	41.2	8.6	8.4	7.5	43.6	42.8	1.0	
4-Mar-22	Average	14.4	9.8	62.5	757.4	917.2	5.0	18.0	48.4	30.4	39.1	8.6	7.9	7.2	43.2	42.7	0.8	Normal(On)/shut-down/Off/Start-up/Normal(ON)
	Min	8.2	0.0	0.0	395.9	149.9	4.8	12.4	46.9	26.6	37.2	8.3	7.1	7.0	42.7	42.5	0.0	
	Max	20.4	2530.0	169.9	964.4	1128.8	5.0	21.8	51.8	39.1	40.9	9.1	8.3	7.8	43.9	43.0	1.0	
5-Mar-22	Average	12.1	3.3	67.5	923.3	1081.4	5.0	20.3	48.3	28.0	40.2	8.6	7.8	7.1	43.0	42.8	1.0	Normal(ON)
	Min	9.6	0.0	17.3	718.8	982.6	5.0	19.0	47.4	25.3	37.6	8.3	7.4	7.0	42.6	42.5	1.0	
	Max	15.4	219.6	174.0	954.9	1123.4	5.0	23.5	49.5	29.4	41.6	8.8	8.0	7.2	43.3	43.1	1.0	
6-Mar-22	Average	12.0	6.5	56.0	932.0	1083.9	5.3	24.5	52.0	27.5	43.2	8.5	7.7	7.2	43.0	42.9	1.0	Normal(ON)
	Min	7.5	0.0	-1.3	876.6	997.3	5.0	19.9	49.4	22.4	41.2	8.0	7.4	7.1	42.7	42.7	1.0	
	Max	15.4	664.7	120.3	954.4	1125.1	6.0	32.1	54.5	30.6	46.8	8.7	8.0	7.3	43.3	43.3	1.0	
7-Mar-22	Average	12.4	2.6	53.8	910.1	1067.8	5.0	21.7	49.5	27.7	40.9	8.4	7.5	7.2	41.7	41.6	0.9	Normal(ON)
	Min	9.3	0.0	19.5	748.3	1015.4	5.0	16.4	47.7	23.4	40.2	8.1	7.2	7.1	39.5	39.3	0.0	
	Max	15.2	610.7	108.8	953.6	1119.3	5.0	25.1	52.6	36.1	42.0	8.7	7.7	7.3	43.6	42.7	1.0	
8-Mar-22	Average	12.6	2.3	58.0	950.0	1073.8	5.0	23.1	48.6	25.6	40.5	7.9	7.5	7.4	42.2	42.0	1.0	Normal(ON)
	Min	11.2	0.0	22.7	943.4	1033.8	5.0	21.2	47.8	23.4	39.4	7.4	7.1	7.1	41.8	41.7	1.0	
	Max	13.7	612.8	106.1	966.3	1115.4	5.0	26.2	50.3	27.3	42.4	8.6	7.7	7.6	42.4	42.4	1.0	
9-Mar-22	Average	12.6	3.0	67.8	947.5	1070.3	5.0	23.7	49.1	25.5	40.4	8.4	7.5	7.8	41.4	41.4	1.0	Normal(ON)
	Min	10.6	0.0	13.3	923.9	971.5	5.0	20.4	48.1	22.1	39.0	7.4	7.0	7.4	40.4	40.4	1.0	
	Max	15.7	891.5	175.7	968.4	1115.0	5.1	29.4	51.7	27.9	43.3	9.9	8.2	8.8	42.4	42.2	1.0	
10-Mar-22	Average	12.6	0.7	62.0	956.3	1070.3	5.0	25.4	49.9	24.5	40.7	7.9	8.2	7.7	42.0	42.3	1.0	Normal(ON)
	Min	10.5	0.0	8.2	947.0	1032.2	5.0	21.7	48.6	17.3	39.7	7.6	7.8	7.5	40.5	40.5	1.0	
	Max	15.0	54.1	164.7	1023.3	1096.8	5.0	35.7	52.9	26.9	44.8	8.0	8.4	7.8	43.4	44.1	2.0	
11-Mar-22	Average	12.3	2.9	55.8	959.2	1074.5	5.0	27.9	51.2	23.2	42.8	7.9	7.9	7.7	42.2	41.9	1.0	Normal(ON)
	Min	10.7	0.1	10.7	946.8	1039.1	5.0	24.1	49.6	18.6	40.4	7.9	7.6	7.5	41.8	41.6	1.0	
	Max	13.5	673.3	193.4	1031.5	1114.7	5.0	33.8	52.6	25.6	44.9	8.0	8.1	7.8	42.5	42.1	1.0	
12-Mar-22	Average	13.0	2.1	36.7	925.7	1053.4	5.0	29.7	52.3	22.6	43.3	8.1	7.8	7.6	42.1	41.9	1.0	Normal(ON)/Shut-down/Off
	Min	11.0	0.0	0.0	689.2	590.2	5.0	20.0	49.8	18.3	39.7	7.9	7.4	7.2	41.9	41.6	1.0	
	Max	20.4	135.0	146.6	959.5	1123.3	5.0	36.1	54.5	29.9	46.9	8.2	8.2	7.8	42.3	42.1	1.0	
13-Mar-22	Average	20.2	0.1	0.1	303.7	128.0	5.5	35.3	40.8	5.5	19.1	9.6	9.9	7.7	4.6	4.5	0.1	Off
	Min	11.0	0.0	0.0	110.6	46.1	4.9	18.5	21.2	-28.6	0.1	7.9	7.4	7.2	0.0	0.0	0.0	
	Max	20.4	135.0	146.6	959.5	1123.3	5.7	63.0	55.6	32.1	46.9	10.5	10.8	7.9	42.3	42.1	1.0	
14-Mar-22	Average	20.2	0.1	0.1	116.6	47.1	5.7	22.2	47.1	24.9	27.1	9.8	10.2	7.8	0.1	0.0	0.0	Off
	Min	11.0	0.0	0.0	61.4	32.9	4.9	18.5	21.2	-28.6	0.1	7.9	7.4	7.2	0.0	0.0	0.0	
	Max	20.4	135.0	146.6	959.5	1123.3	5.9	63.0	55.6	32.1	46.9	10.5	10.8	7.9	42.3	42.1	1.0	
15-Mar-22	Average	20.2	0.2	0.2	116.9	47.8	5.7	22.1	47.1	25.0	27.1	9.7	10.2	7.8	0.1	0.1	0.0	Off
	Min	11.0	0.0	0.0	61.4	32.9	4.9	18.5	21.2	-28.6	0.1	7.9	7.4	7.2	0.0	0.0	0.0	
	Max	20.4	135.0	146.6	959.5	1123.3	5.9	63.0	55.6	32.1	46.9	10.5	10.8	7.9	42.3	42.1	1.0	
16-Mar-22	Average	20.2	0.3	0.3	117.2	48.5	5.7	22.1	47.1	25.0	27.1	9.7	10.2	7.8	0.1	0.1	0.0	Off
	Min	11.0	0.0	0.0	61.4	32.9	4.9	18.5	21.2	-28.6	0.1	7.9	7.4	7.2	0.0	0.0	0.0	
	Max	20.4	135.0	146.6	959.5	1123.3	5.9	63.0	55.6	32.1	46.9	10.5	10.8	7.9	42.3	42.1	1.0	
17-Mar-22	Average	13.4	27.6	31.6	224.1	757.5	5.5	23.1	33.2	10.1	27.3	7.6	7.2	7.3	35.4	33.7	0.1	Off/Start-up/Normal(ON)
	Min	0.0	0.0	-19.8	-17.8	-17.8	0.0	-17.8	-17.8	-6.8	-17.8	0.0	0.0	0.0	0.0	0.0	0.0	
	Max	20.4	763.2	135.1	753.7	1099.0	6.2	39.4	54.2	29.2	42.8	8.5	9.0	8.1	42.5	42.1	1.0	



March 2022 Incinerator Averages Ranges

	TheDate	OX6min	COmin	NOXmin	PrimTemp	SecTemp	SNCR	DemTemp	CarbTemp	DiffTemp	IDFanTemp	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	OpMode
18-Mar-22	Average	13.3	2.5	62.6	888.1	1033.2	5.7	29.0	51.2	22.2	40.6	7.8	7.2	7.7	42.1	34.2	0.2	Normal(ON)/Shut-down/Off
	Min	9.2	0.0	0.0	637.4	476.6	5.2	21.3	46.0	0.1	30.0	7.5	7.0	6.9	22.6	0.0	0.0	
	Max	20.3	370.6	186.5	955.1	1144.0	6.2	45.9	54.3	27.1	43.3	8.5	7.5	7.9	43.9	42.5	1.0	
19-Mar-22	Average	20.2	0.1	0.6	618.4	896.2	5.8	53.4	30.7	-22.7	14.0	7.7	7.6	8.4	1.6	0.0	0.0	Off/Start-up
	Min	12.1	0.0	-16.5	551.5	408.4	5.2	43.0	19.6	-36.7	10.4	7.0	7.2	7.1	0.0	0.0	0.0	
	Max	20.4	23.1	46.9	647.1	1028.7	6.3	67.1	46.5	-0.3	29.9	8.3	7.9	9.5	22.4	0.0	0.0	
20-Mar-22	Average	20.1	0.4	0.4	424.1	615.6	5.8	43.4	18.5	-24.9	11.0	8.3	8.0	8.4	1.2	0.0	0.0	Start-up/Shut-down/Off/Start-up
	Min	11.4	0.0	-13.2	240.0	172.6	5.3	37.6	15.9	-30.1	7.6	7.7	7.3	7.2	0.0	0.0	0.0	
	Max	20.4	317.3	50.1	640.5	951.4	6.3	47.1	21.8	-16.9	15.6	8.7	8.5	9.1	7.5	0.0	0.0	
21-Mar-22	Average	16.8	1.0	28.4	728.5	960.8	5.7	34.7	33.2	-1.5	22.3	7.5	7.2	7.8	18.8	0.0	0.3	Start-up/Normal(ON)
	Min	9.1	0.0	-16.5	551.4	807.9	4.9	13.9	14.4	-25.6	6.6	7.2	7.0	6.9	0.1	0.0	0.0	
	Max	20.4	601.1	182.9	946.5	1092.3	6.3	52.4	52.6	29.4	42.2	9.8	7.8	8.9	42.0	0.0	1.0	
22-Mar-22	Average	13.9	1.4	61.8	942.4	1060.2	5.0	25.5	49.8	24.3	40.0	7.3	7.3	7.7	39.8	0.4	0.9	Normal(ON)/Shut-down/Start-up/Normal(ON)
	Min	10.9	0.0	0.0	673.0	762.5	5.0	16.8	42.3	2.1	23.5	7.2	7.0	7.6	20.1	0.0	0.0	
	Max	20.4	70.4	196.9	988.8	1118.3	5.3	40.3	51.5	30.9	42.5	7.5	7.7	7.8	41.6	15.0	1.0	
23-Mar-22	Average	12.6	2.7	69.9	918.8	1049.7	5.0	20.9	48.3	27.3	40.0	7.2	7.5	8.0	35.9	38.4	0.7	Normal(ON)/Shut-down/Off
	Min	8.9	0.0	0.0	672.7	556.3	5.0	16.5	42.6	1.6	23.5	7.2	7.2	7.5	20.0	15.2	0.0	
	Max	20.3	576.7	220.5	962.9	1124.6	5.3	41.0	50.2	31.8	43.1	7.4	7.9	8.2	41.5	40.8	1.0	
24-Mar-22	Average	12.5	4.6	55.1	886.5	1020.7	5.4	25.0	50.2	25.1	41.0	7.2	7.4	7.9	36.2	37.1	0.6	Off/Start-up/Normal(ON)
	Min	5.9	0.0	-13.2	649.5	435.0	5.0	13.3	40.6	-19.9	18.8	7.2	7.0	6.9	4.9	4.6	0.0	
	Max	20.4	872.0	211.1	949.6	1115.3	5.7	60.5	53.6	39.4	46.4	7.5	7.9	8.6	40.4	40.6	1.0	
25-Mar-22	Average	11.8	2.1	73.5	912.9	1071.8	5.1	25.1	52.6	27.6	45.7	7.5	7.3	7.5	40.4	41.1	0.9	Normal(ON)/Shut-down
	Min	8.2	0.0	-1.2	816.0	998.7	5.0	14.7	50.5	22.1	41.4	7.2	6.8	7.2	39.7	40.3	0.0	
	Max	14.0	377.2	213.5	969.4	1113.0	5.3	32.4	54.5	36.6	49.7	7.8	7.9	7.7	42.1	41.7	1.0	
26-Mar-22	Average	14.7	4.3	40.8	636.7	950.1	5.2	31.3	42.7	11.4	29.7	8.3	7.2	7.7	25.5	25.5	0.3	Shut-down/Off/Start-up/Normal(ON)
	Min	6.5	0.0	0.0	349.3	697.4	5.0	13.6	20.8	-31.3	7.9	7.5	7.0	7.3	0.1	0.0	0.0	
	Max	20.4	727.4	180.8	933.2	1117.7	5.6	61.1	54.0	36.8	45.9	9.2	7.5	7.9	40.6	40.9	1.0	
27-Mar-22	Average	12.3	11.7	61.6	898.2	1079.9	5.0	19.9	50.1	30.2	43.2	7.7	7.1	7.6	39.9	39.8	0.8	Normal(ON)/Shut-down/Off/Start-up/Normal(ON)
	Min	9.4	0.0	0.0	630.0	796.5	4.9	11.1	48.2	25.8	38.9	7.4	7.0	7.0	39.3	39.0	0.0	
	Max	20.3	7797.9	327.8	992.7	1146.2	5.1	26.0	51.8	39.6	46.9	8.4	7.4	8.0	40.8	41.0	1.0	
28-Mar-22	Average	12.4	2.7	63.8	956.9	1073.2	5.0	20.5	49.2	28.7	42.1	7.6	7.4	7.5	39.4	39.0	1.0	Normal(ON)/Shut-down/Off
	Min	7.9	0.0	-0.4	904.2	1001.9	5.0	15.7	48.1	26.9	39.4	7.4	7.2	7.4	39.3	38.8	1.0	
	Max	14.8	887.0	240.6	1019.6	1119.2	5.0	24.1	51.0	32.5	44.4	8.0	7.5	7.7	39.6	39.2	1.0	
29-Mar-22	Average	12.2	4.3	42.6	959.5	1047.3	5.0	19.0	49.5	30.4	41.8	7.6	7.4	7.6	40.1	39.8	1.0	Off/Start-up/Normal(ON)/Shut-down/Off
	Min	9.4	0.0	0.0	889.8	586.2	5.0	13.9	47.9	26.0	39.0	7.5	7.2	7.5	39.3	38.8	0.0	
	Max	20.4	653.4	138.1	1012.9	1117.2	5.0	25.6	51.6	36.0	45.5	7.9	7.5	7.7	40.4	40.2	1.0	
30-Mar-22	Average	12.8	6.5	31.9	892.2	967.1	5.0	17.5	49.0	31.4	40.4	7.9	7.5	7.5	40.7	40.6	0.9	Off/Start-up/Normal(ON)
	Min	7.8	0.0	-0.4	795.8	423.4	5.0	11.5	48.0	25.8	37.2	7.5	7.2	7.2	40.0	39.9	0.0	
	Max	20.4	1127.7	381.9	993.5	1117.8	5.0	25.1	50.9	36.9	44.5	8.3	8.2	7.7	41.1	41.2	1.0	
31-Mar-22	Average	11.3	2.7	57.1	822.6	1058.2	5.5	21.6	51.4	29.8	44.1	7.7	7.4	7.6	40.7	41.1	1.0	Normal(ON)
	Min	4.9	0.0	-2.0	476.2	965.0	5.0	14.4	48.1	26.5	39.5	7.2	7.1	7.1	39.1	40.8	1.0	
	Max	14.8	607.1	167.8	970.0	1141.6	6.4	28.0	54.5	34.7	48.5	8.1	8.2	8.4	41.3	41.5	1.0	

March 2022 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
01-Mar-22	522.50	500.00	510.40	512.10	510.10	501.20	403.00	513.30	430.80	520.20	451.00	511.50	403.80	139.10	162.40	519.60	513.10	441.20	8.20	283.70	506.00	508.00	503.60	125.20	10000.00	210971
02-Mar-22	501.00	276.60	502.80	501.20	500.50	504.90	228.10	407.00	441.60	528.40	311.30	531.60	519.80	535.40	158.50	566.00	508.30	404.00	154.20	203.70	418.50	504.60	240.80	207.90	9656.70	
03-Mar-22	406.20	504.20	435.90	500.70	500.80	500.20	200.20	401.20	414.40	342.30	205.40	450.40	448.90	453.70	301.60	250.30	206.30	0.00	0.00	0.00	0.00	550.40	503.00	516.00	8092.10	
04-Mar-22	507.80	522.40	519.00	0.00	505.70	513.60	513.90	457.90	493.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.00	39.60	73.90	4166.60	
05-Mar-22	504.80	504.70	505.50	505.80	508.90	508.50	0.00	527.20	541.00	542.10	403.10	562.50	542.10	553.60	507.30	524.60	451.00	516.50	0.00	200.20	361.20	482.80	80.70	0.00	9834.10	
06-Mar-22	364.50	502.10	502.00	401.60	503.90	501.80	139.60	541.40	139.60	0.00	0.00	502.70	509.40	59.00	202.40	0.00	536.90	534.30	162.70	118.00	501.30	415.00	505.10	13.30	7656.60	
07-Mar-22	0.00	0.00	0.00	391.80	329.40	507.60	155.00	390.20	512.40	518.00	265.40	545.00	522.20	201.80	506.10	559.30	519.20	360.60	0.00	450.90	500.10	500.60	504.80	302.20	8542.60	
08-Mar-22	350.40	503.00	500.20	502.00	452.20	410.10	346.90	294.90	467.60	458.10	455.70	450.90	482.50	468.00	450.50	453.50	460.90	488.20	154.40	511.30	507.70	506.30	229.90	0.00	9905.20	
09-Mar-22	511.30	511.20	506.20	501.70	504.60	507.10	301.30	452.40	451.60	454.80	454.30	452.10	460.70	466.50	461.50	450.70	453.10	465.30	226.50	250.00	264.40	302.20	304.60	285.90	10000.00	
10-Mar-22	508.80	505.50	503.80	506.90	515.30	509.10	157.90	508.70	504.70	522.80	346.70	512.70	474.00	530.50	195.40	573.50	549.70	235.90	143.20	202.20	503.70	370.30	487.40	95.10	9963.80	
11-Mar-22	155.20	501.30	500.50	503.00	495.00	505.00	230.20	470.50	546.10	508.00	298.20	511.40	520.40	531.80	104.70	522.60	505.80	315.60	104.20	208.30	504.60	506.40	500.60	110.40	9659.80	
12-Mar-22	503.40	501.30	503.40	504.60	489.50	506.10	183.20	452.60	468.80	458.00	452.80	453.00	513.70	459.90	468.30	457.90	460.40	452.60	180.60	0.00	0.00	0.00	0.00	0.00	8470.10	
13-Mar-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
14-Mar-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
15-Mar-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
16-Mar-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
17-Mar-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	421.30	580.70	507.80	1509.80	
18-Mar-22	510.40	507.20	507.40	505.10	514.40	505.00	592.50	467.50	478.70	485.40	496.40	506.20	480.30	496.20	457.20	485.20	431.20	418.40	13.20	0.00	0.00	0.00	0.00	0.00	8857.90	
19-Mar-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
20-Mar-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
21-Mar-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	604.50	603.50	604.20	581.80	251.70	570.70	607.40	494.90	616.60	395.20	5330.50	
22-Mar-22	602.90	601.40	524.20	612.50	560.30	616.00	318.70	405.60	593.30	598.70	598.00	606.10	600.10	594.70	641.50	583.70	590.90	351.00	0.00	0.00	0.00	0.00	0.00	0.00	9999.60	
23-Mar-22	505.80	517.40	505.70	512.60	522.20	528.30	431.40	459.30	612.10	414.10	525.20	546.50	606.90	599.90	598.50	606.40	564.10	555.40	388.20	0.00	0.00	0.00	0.00	0.00	10000.00	
24-Mar-22	0.00	0.00	513.30	507.00	227.50	434.90	509.00	503.30	562.60	602.50	604.20	602.60	600.10	605.10	395.20	602.90	544.30	111.30	103.10	0.00	0.00	0.00	0.00	0.00	8028.90	
25-Mar-22	600.80	611.20	601.10	600.20	541.90	601.10	318.40	541.20	559.40	556.90	546.10	548.70	405.50	402.30	402.00	404.90	440.40	408.60	220.20	136.20	506.70	42.70	0.00	0.00	9996.50	
26-Mar-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	435.50	0.00	0.00	331.30	528.10	618.80	611.20	490.70	525.70	515.90	520.70	521.70	513.00	5612.60	
27-Mar-22	516.40	512.40	516.60	521.50	520.90	524.00	411.70	458.00	358.10	0.00	0.00	0.00	0.00	301.80	623.10	594.60	602.70	619.40	305.80	512.50	532.60	527.20	523.70	517.00	10000.00	
28-Mar-22	529.80	527.60	519.10	517.20	527.40	528.20	373.00	536.30	300.80	583.30	581.40	582.90	604.80	622.40	501.50	495.50	482.50	538.00	436.60	0.00	0.00	0.00	0.00	0.00	9788.30	
29-Mar-22	0.00	528.90	527.70	527.20	529.20	530.30	372.80	502.80	502.60	557.80	501.00	508.80	547.40	502.70	511.30	574.50	533.60	549.90	615.60	0.00	0.00	0.00	0.00	0.00	9424.10	
30-Mar-22	0.00	0.00	0.00	0.00	403.50	400.70	306.10	403.80	600.80	606.00	595.10	604.60	602.00	606.30	600.50	247.70	0.00	0.00	0.00	65.70	341.90	204.40	0.00	0.00	6589.10	
31-Mar-22	0.00	0.00	0.00	0.00	0.00	603.20	261.50	496.70	448.50	0.00	498.90	543.40	554.00	602.30	599.50	598.10	608.80	590.10	437.90	622.40	620.10	623.90	620.30	556.90	9886.50	



March 2022 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
3/3/2022 15:27	0	90.4	0	0	779	0	9.9	8.08	1.82	0	0	0	0	0	0	0	
3/3/2022 15:40	0	90.4	0	755	779	2.4	0	8.08	0	0	0	0	0	0	0	0	
3/3/2022 15:56	93	90.4	0.2599998	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
3/28/2022 22:35	0	90.4	0	0	779	0	0	8.08	0	1	0.3333333	-1	-0.1	0.6	0	0.6	
3/28/2022 22:39	91	90.4	0.05999985	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
3/28/2022 22:44	0	90.4	0	782	779	0.3	0	8.08	0	0	0	0	0	0	0	0	
3/28/2022 22:47	0	90.4	0	0	779	0	8.1	8.08	0.02000046	0	0	0	0	0	0	0	
3/30/2022 23:18	0	90.4	0	0	779	0	0	8.08	0	0	0	-1	-0.1	0.6	0	0.6	
3/30/2022 23:22	91	90.4	0.05999985	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
3/30/2022 23:26	0	90.4	0	779	779	0	0	8.08	0	0	0	0	0	0	0	0	
3/30/2022 23:30	0	90.4	0	0	779	0	8.1	8.08	0.02000046	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
3/6/2022	8:12	8:13	0:01	Normal	7.4	Low O2 levels caused by CO spike.	Incinerator went into feeder lockout until the O2 levels returned to the normal operating range.
3/31/2022	9:57	10:17	0:20	Normal	6.4	Low O2 levels caused by CO spike.	Incinerator went into feeder lockout until the 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
3/4/2022	9:00	17:00	8:00	Normal	11.7	13.5	High CO was caused by a build-up of waste in the primary chamber.	The incinerator was brought to a controlled shut-down.

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% O ₂	as mg/m ³	Explanation	Taken
3/3/2022	4:00	7:00	3:00	Normal	9.8	11.3	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
3/6/2022	8:30	13:00	4:30	Normal	11.9	13.7	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
3/6/2022	22:30	3:00	4:30	Normal	14.2	16.4	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
3/24/2022	16:00	21:00	5:00	Normal	13.5	15.6	High CO levels caused by cycling of the internal rams.	The incinerator was brought to a controlled shut-down.
3/29/2022	18:00	22:00	4:00	Normal	9.8	11.3	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
3/30/2022	17:00	22:00	5:00	Normal	14.2	16.4	High CO levels caused by a build up of waste at the exit to the ash quench pit.	No waste was fed until the blockage was cleared and the CO levels returned to the normal operating range.
3/31/2022	10:00	14:00	4:00	Normal	12.9	14.9	Series of small spikes caused by waste falling over inside 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
3/9/2022	6:48	7:19	0:31	Normal	985	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.
3/23/2022	21:49	22:35	0:46	Normal	980	Low upper chamber temperature was caused by a high flame port air setting during shut-down.	No waste was fed during this period. The incinerator was brought to a controlled shut-down.
3/31/2022	0:29	4:03	3:34	Normal	983	Upper chamber temperature dropped due to the incinerator sitting idle.	Incinerator went into feeder lockout. Operator adjusted FPA settings to return the upper chamber temperature to the normal operating range.

Atomizer Amps < 36

	Start	Stop		Op.	Atom. A	Atom. B		Action
Date	Time	Time	Duration	Mode	amps	amps	Explanation	Taken
3/18/2022	18:21:00	22:23:00	4:02:00	Normal		11.4	Low amperage caused by an oil leak on atomizer B.	The unit was brought to a controlled shut-down and the oil leak was repaired.
3/23/2022	9:24:00	12:24:00	3:00:00	Normal	32.5	39.8	Low amperage caused by an oil leak on atomizer A.	The unit was brought to a controlled shut-down and the oil leak was repaired.