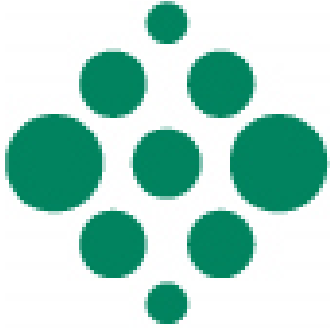




Stericycle®

Protecting People. Reducing Risk.™

Q2 2020

Incineration Report





Stericycle®
Protecting People. Reducing Risk.™

Stericycle, ULC

95 Deerhurst Drive
Brampton, ON
L6T 5R7
Tel.: (905) 789-6008
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July 31, 2020

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 second quarter of 2020.

This is the fourth quarterly incineration report under the new performance conditions. During April 2020 there were 8 occurrences of the 4-hour CO alarm & 0 occurrences of the 12-hour CO alarm. In May 2020 there were 19 occurrences of the 4-hour CO alarm and 4 occurrences of the 12-hour CO alarm. In June 2020 there were 4 occurrences of the 4-hour CO alarm and 2 occurrences of the 12-hour CO alarm. Stericycle will continue to work with the incinerator operators to further reduce the number of CO alarms.

In May of 2020 the annual source test of the incinerator was conducted by RWDI at the Stericycle facility. The full report will be provided to the MECP in Q3 2020.

SECOND QUARTER 2020 INCINERATOR QUARTERLY REPORT - SUPPLEMENTAL INFORMATION

- The Emergency Bypass stack was used during once during Q2 2020. A summary of the bypass along with the follow-up report to the MECP is included 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 2020, the incinerator was run by trained Stericycle operators Emilio Perez, McLaren Henville, Shayne Lewis & John Amissiah.
- There were no complaints received regarding the operation of the incinerator during the second quarter of 2020.
- Stericycle Inc. operated the incinerator on the following days during the first quarter:

Start-up	Shut Down
3/28/2020 @ 08:11	4/19/2020 @ 07:51
4/22/2020 @ 16:45	4/27/2020 @ 07:29
4/27/2020 @ 11:32	4/29/2020 @ 09:23
4/29/2020 @ 10:12	5/7/2020 @ 15:40
5/7/2020 @ 22:00	5/15/2020 @ 7:24
5/16/2020 @ 14:09	5/21/2020 @ 12:14
5/21/2020 @ 17:40	5/27/2020 @ 9:20
5/27/2020 @ 14:00	5/29/2020 @ 16:20
6/1/2020 @ 13:07	6/11/2020 @ 15:08
6/12/2020 @ 11:24	6/17/2020 @ 10:25
6/17/2020 @ 13:40	6/29/2020 @ 04:57
6/29/2020 @ 9:08	

During Q2 of 2020 routine maintenance was performed on the incinerator during the scheduled shutdowns along with the following additional repairs:

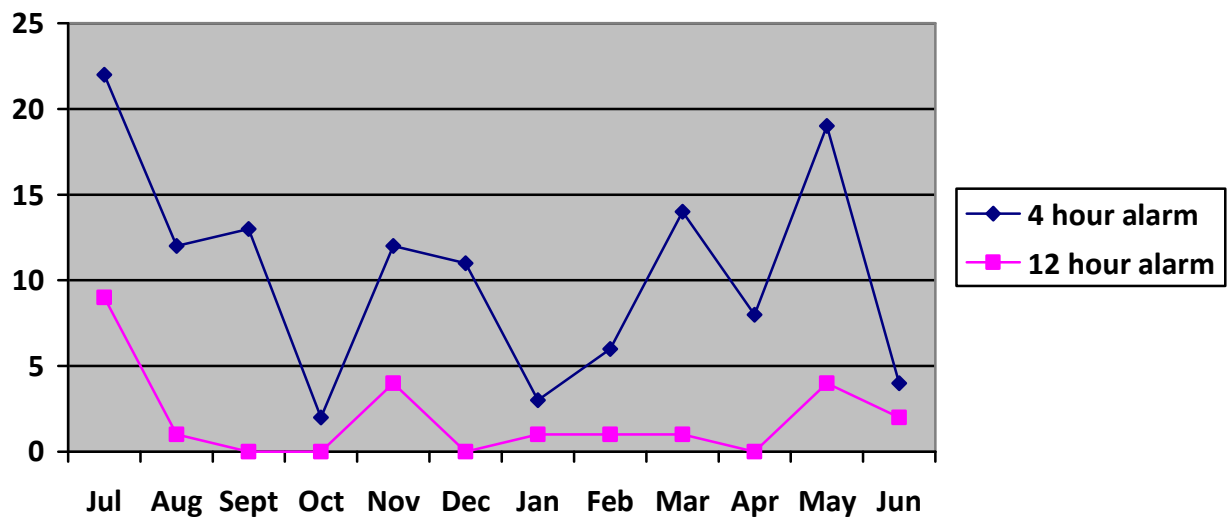
- Repair of the upper chamber burner.

Emergency Bypass Summary Q2 2020

Date	Start Time	End Time	Duration	Emission Volume (m³)	Reason	Corrective Action
4/17/2020	15:15:00	15:23:00	0:08:00	29.17	Failure of the air compressor caused the emergency bypass stack cap to open.	Maintenance started the back-up air compressor. Once air pressure in the lines was re-established, the emergency bypass was closed. Maintenance called in a 3rd party contractor to repair the main air compressor on Sunday April 19, 2020.

CO Alarm Chart Q1 2020

Month	4 Hour CO average alarms	12 Hour CO average alarms
July	22	9
August	12	1
September	13	0
October	2	0
November	12	4
December	11	0
January	3	1
February	6	1
March	14	1
April	4	0
May	19	4
June	4	2



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 2020.

Stericycle is very committed to the full compliance with all conditions of its Provisional Certificate of Approval, throughout the year, whenever a situation of possible non-compliance was identified; immediate actions were taken to ensure full compliance. Stericycle has mechanisms in place to ensure full compliance at all times. Employees are aware of their responsibilities and are trained appropriately.

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

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

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

Regards,

A handwritten signature in black ink, appearing to be 'DK' with a stylized flourish extending to the right.

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



Stericycle®
Protecting People. Reducing Risk.™

April 20th 2020

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 #: 7207-BNRQWM

On April 17th, 2020 at approximately 15:15 the emergency bypass stack was opened due to a failure of the main air compressor.

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 duration of eight (8) 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 April 17th 2020 at approximately 15:18 a call was placed to the Spills Action Control center to report the use of the emergency bypass stack. At approximately 15:15 the facilities main air compressor went into fault mode and shut-down causing a loss of air pressure which resulted in the emergency bypass stack cap opening. Maintenance quickly assessed the situation and started the back-up (secondary) air compressor. Once air pressure built up in the lines the emergency bypass stack cap was closed.

During the bypass approximately 29.17m³ 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

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

Kokol, Dan

From: Broux, Christelle (MECP) <Christelle.Broux@ontario.ca>
Sent: Monday, April 20, 2020 4:58 PM
To: Kokol, Dan
Subject: RE: Emergency Bypass Report Ref # 7207-BNRQWM

Thank you Dan, I've received the bypass report and will proceed to close off this incident.

I also just received the email that you copied me on re: Stericycle's pandemic relief ECA request. You will hear from Permissions branch directly regarding that request. Thanks for the FYI.

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 ← PLEASE NOTE MY PHONE NUMBER HAS CHANGED**

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

From: Kokol, Dan <DKokol@STERICYCLE.com>
Sent: April-20-20 3:24 PM
To: Broux, Christelle (MECP) <Christelle.Broux@ontario.ca>
Subject: Emergency Bypass Report Ref # 7207-BNRQWM

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good afternoon Christelle,

Attached is the follow-up report for the reported emergency bypass on April 17th, 2020. Please feel to contact me if you have any questions.

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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April 2020 Incineration Averages

TheDate		OX6min	COmin	NOXmin	PrimTemp °C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp	IDFanTemp°C	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Operating Mode
4/1/2020	Average	11.4	4.0	75.5	989.1	1041.5	6.6	32.9	50.5	17.6	41.6	8.0	8.2	6.7	42.5	42.9	0.0	NORMAL(On)
	Min	9	0.0	17.5	947.3	1019.7	6.5	27.2	49.6	11.5	38.8	7.7	7.6	6.6	42.3	42.5	0.0	
	Max	12.9	513.6	260.7	1028.7	1169.3	6.6	39.7	51.2	22.4	45.4	8.4	8.6	7.0	42.7	43.1	0.0	
4/2/2020	Average	11.2	3.0	74.3	952.8	1043.4	6.6	32.2	49.6	17.4	40.4	7.9	8.0	6.7	42.9	43.0	0.0	NORMAL(On)
	Min	7.82	0.0	19.0	888.8	1020.5	6.6	26.3	43.8	12.1	37.0	7.5	6.9	6.5	42.4	42.6	0.0	
	Max	12.6	21.1	256.2	997.2	1128.7	6.6	38.0	51.1	23.1	43.0	8.3	8.7	6.9	44.1	43.4	0.0	
4/3/2020	Average	11.4	6.2	50.8	1009.7	1035.1	6.6	28.1	49.2	21.1	39.5	7.7	7.8	6.7	42.4	42.9	0.0	NORMAL(On)
	Min	9.38	0.0	14.4	962.4	1019.3	6.6	24.3	47.6	16.0	37.8	7.3	6.9	6.6	42.2	42.8	0.0	
	Max	14.0	654.7	231.7	1059.1	1174.8	6.6	34.6	50.6	23.3	41.7	8.1	8.5	6.9	42.5	43.1	0.0	
4/4/2020	Average	11.3	4.4	76.9	970.4	1041.9	6.6	26.8	48.8	22.0	40.5	8.0	8.4	6.9	43.5	43.2	0.4	NORMAL(On)
	Min	8.5	0.0	15.4	916.4	1019.4	6.6	23.3	46.9	19.9	38.5	7.6	7.7	6.7	42.2	42.7	0.0	
	Max	14.1	743.7	291.0	1024.2	1125.2	6.6	30.1	50.1	23.7	42.0	8.3	8.9	7.2	44.4	43.4	1.0	
4/5/2020	Average	11.1	5.0	64.4	1021.9	1036.5	6.6	25.4	47.9	22.6	39.9	7.8	8.5	6.7	43.1	43.2	0.8	NORMAL(On)
	Min	8.9	0.0	15.3	982.6	1019.4	6.6	21.9	45.6	20.9	37.8	7.4	7.9	6.6	42.4	42.1	0.0	
	Max	13.6	675.8	315.1	1062.6	1101.6	6.6	28.4	49.4	23.9	41.9	8.2	8.9	7.0	44.2	43.8	1.0	
4/6/2020	Average	11.5	4.1	79.5	972.5	1039.1	6.6	26.2	48.4	22.1	40.6	7.8	8.3	6.7	42.8	42.3	1.4	NORMAL(On)
	Min	7.7	0.0	19.3	882.5	1019.5	6.6	22.0	45.6	20.9	37.8	7.4	8.0	6.6	42.5	42.1	1.0	
	Max	14.3	433.6	266.9	1066.3	1105.1	6.6	29.0	49.9	23.7	42.1	8.1	8.8	6.9	42.9	42.6	2.0	
4/7/2020	Average	11.6	4.4	66.0	1014.2	1040.5	6.6	27.1	48.7	21.5	40.6	7.9	8.3	6.7	42.7	42.5	1.9	NORMAL(On)
	Min	9.3	0.0	21.7	970.6	1016.2	6.6	24.0	46.8	20.2	38.5	7.3	7.7	6.6	42.6	42.2	1.0	
	Max	13.6	484.9	207.6	1071.8	1109.2	6.6	29.5	49.7	23.0	42.2	9.0	8.7	7.0	43.0	42.6	2.0	
4/8/2020	Average	11.3	2.8	91.1	967.1	1041.5	6.6	26.2	48.4	22.2	40.3	8.6	8.1	6.8	42.7	42.5	2.1	NORMAL(On)
	Min	9.1	0.0	25.2	884.4	1019.9	6.6	23.2	46.8	19.7	38.8	7.9	7.1	6.6	42.6	42.3	1.0	
	Max	13.0	401.6	349.1	1030.4	1130.4	6.6	30.3	50.0	23.6	43.0	10.1	8.7	7.0	42.8	42.7	3.0	
4/9/2020	Average	11.3	2.9	48.0	976.9	1030.1	6.6	24.5	47.4	22.9	39.7	9.1	8.2	6.8	42.6	42.3	1.8	NORMAL(On)
	Min	8.9	0.0	16.2	926.5	1018.7	6.6	21.6	45.1	20.5	37.6	7.8	7.4	6.7	42.5	42.0	1.0	
	Max	14.1	672.2	204.8	1013.5	1118.7	6.6	30.0	50.6	23.8	43.7	12.9	8.9	7.0	42.7	42.6	2.0	
4/10/2020	Average	11.4	3.1	54.2	945.8	1032.7	6.6	23.2	46.5	23.3	39.2	9.3	9.1	6.8	42.7	42.3	2.1	NORMAL(On)
	Min	8.1	0.0	18.6	843.2	1019.0	6.6	21.1	45.1	22.7	38.0	7.0	8.1	6.6	42.5	42.1	1.0	
	Max	13.9	559.7	229.5	1002.1	1117.9	6.6	25.1	47.9	24.1	40.6	13.2	9.7	7.0	42.8	42.5	3.0	
4/11/2020	Average	11.6	3.1	49.8	1011.9	1032.8	6.6	23.8	46.9	23.1	38.0	7.6	10.0	7.9	44.2	42.9	2.5	NORMAL(On)
	Min	9.2	0.0	15.9	946.5	1018.3	6.6	22.5	46.0	22.8	36.9	3.8	9.5	6.6	42.5	42.3	2.0	
	Max	14.4	407.4	133.1	1045.5	1063.3	6.6	25.2	48.0	23.5	39.1	9.3	11.2	10.0	46.0	43.6	3.0	
4/12/2020	Average	11.5	3.2	64.4	1030.8	1035.8	6.6	25.0	47.5	22.4	37.6	8.3	8.7	7.0	43.0	42.8	1.9	NORMAL(On)
	Min	9.8	0.0	16.6	953.7	1019.1	6.6	22.9	46.1	20.4	36.3	7.5	5.1	6.7	42.7	42.4	0.0	
	Max	13.7	560.2	216.9	1070.5	1064.9	6.6	28.7	49.3	23.3	39.3	8.7	10.7	7.6	43.2	43.0	4.0	
4/13/2020	Average	11.1	4.0	65.2	995.7	1036.0	6.6	26.7	48.6	21.9	37.6	7.5	9.5	7.1	42.9	42.6	0.0	NORMAL(On)
	Min	8.5	0.0	17.3	967.7	1018.4	6.6	23.1	46.5	17.7	35.9	6.8	9.3	7.0	42.7	42.3	0.0	
	Max	15.2	616.2	265.5	1062.1	1109.0	6.6	32.4	50.1	23.5	39.4	8.1	9.6	7.3	43.2	42.8	0.0	
4/14/2020	Average	11.6	2.3	44.6	961.0	1026.6	6.6	26.8	49.1	22.4	38.4	7.7	9.5	7.0	43.2	42.6	0.0	NORMAL(On)
	Min	8.6	0.0	17.5	796.9	1017.3	6.6	24.6	47.7	20.1	36.5	5.8	9.2	6.5	42.9	42.3	0.0	
	Max	14.4	36.3	139.3	1060.4	1051.0	6.6	29.6	49.8	23.2	40.2	11.5	9.6	8.1	43.3	42.8	0.0	
4/15/2020	Average	11.4	3.2	50.9	992.6	1029.2	6.6	27.3	49.3	22.0	40.4	7.9	8.8	6.8	43.4	42.7	0.0	NORMAL(On)
	Min	8.8	0.0	16.3	959.0	1017.4	6.6	25.1	48.3	19.5	39.7	6.1	6.7	6.6	43.2	42.5	0.0	
	Max	14.4	474.8	307.0	1028.9	1132.3	6.6	30.4	49.9	23.2	41.1	9.5	10.7	6.9	43.5	43.1	0.0	
4/16/2020	Average	11.6	2.1	44.1	1005.3	1027.6	6.6	27.2	49.2	22.0	40.2	9.0	9.3	6.7	42.9	42.7	0.0	NORMAL(On)
	Min	9.2	0.0	17.2	945.9	1018.5	6.6	25.2	48.2	19.6	39.8	8.7	8.6	6.6	41.8	42.3	0.0	
	Max	14.2	59.8	139.8	1038.1	1059.3	6.6	30.1	49.9	23.1	41.3	9.3	9.7	7.0	43.6	42.9	0.0	
4/17/2020	Average	11.6	4.0	73.2	996.1	1038.1	6.6	30.1	49.7	19.6	41.6	9.2	9.9	6.7	42.8	42.6	0.4	NORMAL(On)
	Min	8.5	0.0	-1.9	946.6	1019.1	6.6	25.2	48.5	15.2	40.0	8.7	9.7	6.6	42.7	42.4	0.0	
	Max	14.2	597.6	312.0	1020.2	1085.6	6.6	35.0	50.3	23.3	43.3	9.5	10.2	6.9	43.1	42.7	1.0	
4/18/2020	Average	11.8	4.0	58.4	968.3	1030.8	6.6	28.4	49.7	21.3	41.4	8.9	10.5	6.8	43.1	42.9	1.1	NORMAL(On)
	Min	10.0	0.9	-1.9	837.3	1013.9	6.6	26.2	48.8	19.1	40.3	8.3	10.0	6.6	42.8	42.5	1.0	
	Max	15.0	65.0	220.4	1034.8	1066.1	6.6	30.9	50.1	22.8	42.7	9.2	11.9	7.0	43.2	43.3	2.0	

April 2020 Incineration Averages

TheDate		OX6min	COmin	NOXmin	PrimTemp °C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp	IDFanTemp°C	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Operating Mode
4/19/2020	Average	16.6	1.5	27.6	694.5	657.0	6.2	29.0	37.3	8.3	32.7	8.7	10.8	7.8	24.4	24.2	0.9	NORMAL(On)/Shut-Down/Off
	Min	9.6	0.0	-2.2	288.6	165.4	5.3	21.0	18.7	-8.8	17.6	7.3	9.7	6.5	0.1	0.0	0.0	
	Max	20.4	522.3	149.2	1027.2	1054.7	6.6	47.1	49.6	21.8	41.4	9.7	13.5	9.5	44.5	43.4	2.0	
4/20/2020	Average	20.3	0.0	0.0	154.4	92.9	6.1	18.1	18.8	0.8	15.1	8.5	10.0	9.3	0.1	0.0	0.0	Off
	Min	20.1	0.0	0.0	80.7	56.7	5.9	10.8	15.6	-5.3	13.9	8.4	9.5	9.1	0.0	0.0	0.0	
	Max	20.4	0.0	0.0	288.3	165.3	6.2	24.4	23.5	7.8	17.5	8.6	10.6	9.5	0.1	0.0	0.0	
4/21/2020	Average	20.3	0.0	0.0	52.4	40.3	6.3	19.2	19.5	0.2	14.6	8.3	9.8	9.1	0.0	0.0	0.0	Off
	Min	20.1	0.0	0.0	33.6	31.1	6.2	15.6	14.5	-7.0	11.9	8.2	9.4	9.1	0.0	0.0	0.0	
	Max	20.4	0.0	0.0	80.7	56.7	6.4	23.6	26.0	10.4	18.9	8.4	10.0	9.1	0.1	0.0	0.0	
4/22/2020	Average	20.2	4.2	0.2	81.3	237.7	6.4	34.0	19.7	-14.3	13.2	8.2	9.8	9.1	0.0	0.0	0.0	Off/Start-up
	Min	20.0	0.0	-4.4	25.8	26.7	6.3	18.9	11.0	-47.3	3.7	8.2	9.6	9.0	0.0	0.0	0.0	
	Max	20.4	38.5	14.3	339.7	835.3	6.4	66.5	24.9	5.4	18.9	8.3	10.3	9.1	0.0	0.0	0.0	
4/23/2020	Average	16.5	11.1	12.2	512.6	901.6	6.5	47.0	25.4	-21.6	17.0	8.5	9.7	8.2	13.9	13.9	0.0	Start-up/Normal(On)
	Min	5.2	0.0	-9.9	25.8	26.7	6.3	18.9	8.9	-47.3	1.8	6.4	7.0	6.6	0.0	0.0	0.0	
	Max	20.4	606.0	79.5	990.1	1048.5	6.7	66.5	52.0	23.3	41.9	9.4	10.6	9.1	40.7	40.8	0.0	
4/24/2020	Average	11.0	5.0	54.3	1015.5	1031.8	6.6	27.0	49.4	22.4	40.4	9.5	11.1	6.7	40.7	40.9	0.0	Normal(On)
	Min	8.3	0.8	27.1	963.2	1019.5	6.6	25.7	48.8	19.3	39.1	8.9	7.9	6.6	40.5	40.0	0.0	
	Max	14.3	638.4	130.4	1051.6	1080.3	6.6	31.0	50.2	23.2	42.4	10.1	14.8	6.9	40.9	41.7	0.0	
4/25/2020	Average	11.6	4.5	48.2	978.7	1029.7	6.6	26.4	49.1	22.7	40.5	9.4	14.2	6.7	40.9	41.7	0.0	NORMAL(On)
	Min	8.6	0.8	23.1	854.2	1018.7	6.6	25.4	48.6	21.1	38.8	8.3	11.0	6.6	40.8	41.6	0.0	
	Max	14.8	587.3	116.9	1036.9	1058.3	6.6	28.3	49.8	23.3	42.5	9.9	14.8	6.9	41.0	41.9	0.0	
4/26/2020	Average	11.6	3.8	55.4	989.4	1030.9	6.6	27.6	49.3	21.7	41.7	9.4	7.9	6.8	41.1	41.7	0.1	NORMAL(On)
	Min	8.9	0.4	22.3	909.5	1018.6	6.6	25.1	48.5	15.7	39.2	8.9	5.3	6.6	40.8	41.2	0.0	
	Max	14.5	462.1	175.7	1038.3	1064.9	6.6	34.7	50.4	23.4	46.5	9.8	11.1	6.9	41.4	42.0	1.0	
4/27/2020	Average	12.4	4.6	51.2	928.2	1024.4	6.6	28.3	49.4	21.2	41.0	9.0	11.0	6.7	40.4	39.9	0.2	NORMAL(On)/Shut-Down/Off/Start-Up/Normal(On)
	Min	8.4	0.0	-13.2	783.4	905.3	6.5	25.5	48.5	12.4	37.4	7.7	5.2	6.6	33.1	32.6	0.0	
	Max	20.0	684.4	260.7	1040.2	1130.7	6.6	36.9	50.2	23.1	42.8	10.5	14.4	7.0	42.0	41.4	1.0	
4/28/2020	Average	12.3	4.5	53.0	880.3	1026.2	6.6	27.7	46.5	18.9	41.2	9.2	13.4	6.7	41.5	40.8	0.0	Normal(On)
	Min	8.5	0.0	23.9	595.1	970.8	6.6	25.8	25.3	-0.5	30.7	7.9	11.7	6.6	41.2	40.1	0.0	
	Max	15.7	672.1	152.3	1050.0	1064.3	6.6	30.1	50.3	23.0	43.7	10.3	14.6	6.9	42.3	41.2	1.0	
4/29/2020	Average	17.2	145.8	14.2	606.1	532.2	6.7	29.1	39.6	10.4	31.9	8.9	12.9	7.5	23.5	23.3	0.0	Normal(On)
	Min	8.5	0.0	-15.4	228.8	43.7	6.6	22.3	23.8	-9.1	16.8	7.9	11.7	6.6	0.1	0.0	0.0	
	Max	20.4	2138.4	62.6	954.8	1028.6	6.9	41.0	50.4	24.1	43.6	10.5	14.8	8.3	42.4	42.3	0.0	
4/30/2020	Average	13.9	17.7	20.3	534.4	618.2	6.7	27.8	38.6	10.8	31.5	9.5	12.4	6.3	24.3	23.5	0.0	Startup/Normal(On)
	Min	4.1	0.0	-15.4	127.6	34.5	6.6	26.9	24.0	-2.9	16.7	9.0	10.1	4.1	0.0	0.0	0.0	
	Max	20.0	807.4	107.5	1006.9	1047.2	6.9	28.5	50.3	22.5	42.8	9.9	14.8	8.3	41.3	40.6	0.0	



April 2020 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	
4/1/2020	0	522	505.2	523.1	515	468.3	265.5	167	199.5	319.7	296.9	103.5	75	533.7	79.5	545.1	552.3	548.6	547.6	552.6	589.9	622	481.5	300.8		9314.3	206065.8
4/2/2020	0	506	501.5	326.5	553.5	535.8	391.5	347.5	423	58	207	319	580.2	242.5	211.5	571.4	509.7	538.6	512.5	524.5	532.8	557.5	426.7	114.5		9491.7	
4/3/2020	0	549	503.3	405.8	511.1	292.6	344.5	71	152.7	548	400.6	0	0	0	206.5	0	553.5	592.3	513.8	469.8	533.8	534.2	422	513		8117.5	
4/4/2020	0	519.4	503.5	529	641.8	509.7	291.7	443.5	566.4	511.5	513	511	520.3	510.7	512.5	554.8	301.3	470.7	260	156	0	295	293.1	0		9414.9	
4/5/2020	0	537.4	529	547.2	514.4	533.5	193.5	506.4	515.5	586.6	534	572	557	567.5	521.4	576.4	427.8	224.5	341.1	467.7	149.2	59	0	0		9461.1	
4/6/2020	0	505	539.3	506.9	518.6	480.4	300	465.6	441.6	454.6	445.2	442.8	427.2	446.1	184.6	509.6	505.8	519.4	519.3	544.6	344.6	442.5	90.5	0		9634.2	
4/7/2020	0	568.5	510	474	501.1	555.9	225.5	304.5	449.1	484.5	443	432.5	429.5	420	229.5	277.6	617.8	528.8	579.1	499.3	0	561.9	423	84		9599.1	
4/8/2020	0	506.7	519.4	507	504.6	466.8	320	443.6	493	471.6	444.8	436	486	262.5	240	529.7	506.4	574	516.7	538.6	215.1	236.6	250	0		9469.1	
4/9/2020	0	0	177.4	0	172	0	171.2	457.5	491.5	453.4	429.6	474.5	462	382.8	291.1	591.7	527.6	533.1	518.1	0	0	0	0	57.5		6191	
4/10/2020	0	316.5	0	0	236	0	0	445	440.5	422.1	454.5	439.5	450	460.5	303	576.2	501.9	526.2	565.4	510.6	551.1	586.7	461	517.5		8764.2	
4/11/2020	0	514.5	545	550	518	646.5	92	509.9	509.8	466.6	508.6	508.7	501	505.8	419.3	251.7	0	0	0	0	0	0	420	0		7467.4	
4/12/2020	0	532	524	514.5	524.5	522.5	0	596.4	505.1	537.6	511.1	505.1	507.8	502	0	521.8	512.6	530.5	371.1	318.9	597.9	336	0	0		9471.4	
4/13/2020	0	410.5	500.5	504	622	459.7	619.5	508	450	0	225.5	503	0	504.5	152.5	579	544.8	567.8	540.8	551.4	581.1	525.5	555.7	60		9965.8	
4/14/2020	0	538.9	432.1	0	0	0	0	263	482.8	546.1	410	0	522	429.5	348.5	534	557	568.2	527.9	514.9	522.2	552	514.3	0		8263.4	
4/15/2020	0	175.2	148.7	0	287.8	173.6	0	426.5	452.6	444	451.5	433.9	420	441.5	232.5	558.4	532.1	539.1	529.3	538.8	535.3	557	508.4	0		8386.2	
4/16/2020	0	319.4	0	0	0	0	0	516	462.8	460.6	443.1	439.8	470.1	437	336.3	538.8	384.6	542.8	583.3	510.3	551.5	530.4	531.8	533.5		8592.1	
4/17/2020	0	539.6	514	520.5	523.5	511.5	388.2	420.4	431	565.5	431.5	523.5	477	459.8	208.8	27.2	442.3	542.3	519.6	536.1	530.1	174	238.5	0		9524.9	
4/18/2020	0	508.6	527	0	0	0	0	214.6	512.8	515.3	511.8	585	511.4	516.7	506.6	515.9	557.6	521	432.8	438.3	393.5	529.7	666.4	528.7		9493.7	
4/19/2020	0	552.5	544.7	0	0	537.7	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		1657.9	
4/20/2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	
4/21/2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	
4/22/2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	
4/23/2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	521	554.5	512.5	511.4	533.2	565.2	503	0		3700.8	
4/24/2020	0	467.5	413	182.5	404.5	438	191.5	443.8	585.1	465.8	447.3	448.1	0	559.5	365.1	577.6	513.1	568.6	539.1	512.1	522.6	531.4	205	0		9381.2	
4/25/2020	0	511.5	509	466	0	0	0	440	552.3	0	630	632	601.6	0	649.6	604.8	0	0	0	137.5	432.5	533.5	0	507		7207.3	
4/26/2020	0	598.5	517	522	21.5	610	641.5	503	501	0	530.5	506.6	0	0	0	603.9	517.7	633	239	0	0	529	513.4	533		8520.6	
4/27/2020	0	0	0	0	0	0	369.4	0	0	0	0	0	0	0	507.7	456.3	467.8	454.5	402.5	532	453.5	111	522.5	252.5		4529.7	
4/28/2020	0	532.5	0	0	0	0	0	0	0	0	0	538.6	331.4	592.4	527.1	533.8	520.8	588.4	465.3	314.9	511.5	324.5	0	0		5781.2	
4/29/2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	
4/30/2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	496.3	484.3	484.5	482.5	312.5	442	433.5	523.5	479.5	526.5		4665.1	

April 2020 CEM Calibration Log

[illegible]

Carbon Monoxide > 8ppm 4 hour alarm



Carbon Monoxide > 8ppm 4 hour alarm

	Start	Stop		Op.	Stack CO	Stack CO		Actions
Date	Time	Time	Duration	Mode	@ 11% O2	as mg/m ³	Explanation	Taken
4/1/2020	5:00	9:00	4:00	Normal	10.7	12.3	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
4/3/2020	17:00	0:00	7:00	Normal	8.6	9.9	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
4/4/2020	9:30	13:30	4:00	Normal	9.1	10.5	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
4/5/2020	19:00	23:00	4:00	Normal	8.5	9.8	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
4/13/2020	19:00	4:00	9:00	Normal	8.2	9.5	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
4/17/2020	21:00	4:00	7:00	Normal	8.5	9.8	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
4/24/2020	6:39	10:39	4:00	Normal	8.6	9.9	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
4/27/2020	23:30	4:30	5:00	Normal	8.6	9.9	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.

Secondary Chamber Temperature < 1000°C

	Start Time	Stop Time	Duration	Op. Mode	Temp. °C	Explanation	Actions Taken
Date							
4/19/2020	6:58	11:50	4:52	Shutdown	961	Low upper chamber temperature was caused by no waste being fed into the incinerator and a high draft setting.	The incinerator was brought to a controlled shutdown.

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
4/9/2020	17:53	10:39	16:46	Normal	10.5	Intermittent errors on the pH probe caused false readings to occur periodically.	Maintenance diagnosed the error and re calibrated the pH probe.
4/11/2020	16:02	21:52	5:50	Normal	4.6	low pH caused by lack of caustic due to error on the feed pump controller.	Maintenance diagnosed the pump error and reset the caustic feed control.
4/14/2020	3:24	8:04	4:40	Normal	6.3	Waste fed into the incinerator caused drops in the quench pH.	The caustic feed system adjusted the flow rate to compensate for the pH drop.

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
4/26/2020	12:22	16:37	4:15	Normal	6.3	Low pH caused by pH probe error.	Maintenance recalibrated the pH probe.
4/27/2020	0:38	5:06	4:28	Normal	6.3	Low pH caused by pH probe error.	Maintenance recalibrated the pH probe.

Differential from Demister < 10 C



Differential from Demister < 10°C

	Start	Stop		Op.	Differential Temp		Actions
Date	Time	Time	Duration	Mode	Outlet °C	Explanation	Taken
4/28/2020	2:44	7:44	5:00	Normal	9	Low differential temperature caused by lack of reheat steam.	Maintenance trouble shot the lack of steam and adjusted the reheat steam settings.



May 2020 Incineration Averages

	TheDate	OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp°C	IDFanTemp°C	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Operating Mode
5/1/2020	Average	12	5	49	946	1025	7	27	50	23	41	10	10	6	41	41	0	Normal(On)
	Min	9	0	21	719	1018	7	27	49	22	40	9	9	4	41	40	0	
	Max	15	727	140	1030	1046	7	28	50	23	42	10	11	10	42	41	0	
5/2/2020	Average	12	4	54	893	1027	7	27	50	22	40	9	8	7	41	41	0	Normal(On)
	Min	9	0	24	628	1017	7	26	49	21	40	8	8	7	41	41	0	
	Max	15	704	124	1023	1047	7	29	50	23	41	10	9	7	42	42	0	
5/3/2020	Average	12	3	47	889	1027	7	27	50	23	42	9	8	7	42	43	0	Normal(On)
	Min	8	0	20	688	1018	7	26	49	22	41	8	8	7	42	42	0	
	Max	15	264	156	1021	1065	7	28	50	23	42	10	9	7	43	43	0	
5/4/2020	Average	12	3	51	896	1027	7	27	50	23	41	9	8	7	42	42	0	Normal(On)
	Min	9	0	25	668	1014	7	26	49	22	41	9	8	7	42	42	0	
	Max	15	218	139	1032	1047	7	28	50	23	42	10	9	7	43	42	0	
5/5/2020	Average	12	5	60	956	1027	7	28	50	22	40	9	8	7	42	41	0	Normal(On)/Shut down/Normal(ON)
	Min	9	1	31	900	1017	7	27	49	19	39	9	8	7	33	33	0	
	Max	14	633	175	998	1063	7	31	50	23	41	10	9	8	44	43	0	
5/6/2020	Average	12	8	55	923	1030	7	27	49	22	39	9	8	7	44	43	0	Normal(On)
	Min	8	1	26	769	1020	7	26	49	18	39	8	7	7	43	42	0	
	Max	14	702	246	1010	1195	7	32	50	23	40	10	8	7	44	43	0	
5/7/2020	Average	13	16	41	943	983	7	30	48	18	39	9	8	7	40	40	0	Normal(On)/Shut- down/Off/Start-Up
	Min	9	0	0	717	510	7	26	39	-15	25	8	7	7	16	16	0	
	Max	20	5506	124	1030	1064	7	54	50	23	42	10	9	8	44	43	0	
5/8/2020	Average	12	3	47	897	1024	7	29	50	21	41	9	8	7	43	43	0	Start- Up/Normal(On)
	Min	9	0	21	720	996	7	26	44	4	32	7	7	7	32	32	0	
	Max	14	155	137	996	1053	7	40	51	24	42	11	10	8	43	43	0	
5/9/2020	Average	12	4	49	956	1023	7	27	50	22	41	10	9	7	43	43	0	Normal(ON)
	Min	9	0	26	859	1018	7	26	49	21	41	9	7	7	42	43	0	
	Max	14	528	123	1003	1050	7	29	50	23	42	10	14	7	43	43	0	
5/10/2020	Average	12	4	86	899	1036	7	27	49	22	41	9	10	7	43	43	0	Normal(ON)
	Min	7	0	37	822	1019	7	26	49	16	39	9	7	7	42	43	0	
	Max	14	434	245	976	1242	7	34	50	23	43	10	14	7	43	43	0	
5/11/2020	Average	13	7	62	850	1028	7	26	49	23	39	9	8	8	43	43	0	Normal(ON)
	Min	8	0	0	554	1002	7	25	48	21	36	8	7	7	43	43	0	
	Max	17	661	354	995	1107	7	29	50	23	41	10	9	10	43	43	1	
5/12/2020	Average	11	4	63	940	1033	7	28	49	21	40	9	8	7	43	43	1	Normal(ON)
	Min	8	0	24	690	1020	7	25	48	18	38	8	7	7	43	43	0	
	Max	13	670	357	1018	1079	7	32	50	23	43	9	8	7	43	43	1	
5/13/2020	Average	12	3	58	1009	1031	7	27	49	22	39	9	7	7	43	43	1	Normal(ON)
	Min	9	0	25	992	1019	7	25	48	18	37	9	7	7	43	42	0	
	Max	15	112	352	1037	1051	7	31	50	23	43	9	8	7	43	43	1	
5/14/2020	Average	12	3	52	1001	1019	7	27	50	22	40	9	8	7	43	42	1	Normal(ON)
	Min	9	0	0	938	877	7	25	48	21	39	9	7	7	43	42	1	
	Max	15	250	261	1066	1048	7	29	50	23	41	10	8	7	43	43	1	
5/15/2020	Average	17	700	64	754	568	7	34	45	11	35	9	9	8	35	34	1	Normal(ON)/Shut- Down/Off
	Min	6	0	-8	375	159	6	22	34	-48	17	7	7	7	0	0	0	
	Max	20	5931	157	947	1047	7	82	51	28	42	10	13	9	43	43	1	
5/16/2020	Average	16	1	15	410	448	7	51	38	-13	27	9	11	8	16	16	0	Off/Start- Up/Normal(On)
	Min	7	0	-11	140	72	7	23	28	-51	15	8	7	7	0	0	0	
	Max	20	178	62	939	1030	7	83	50	23	43	10	15	9	43	43	1	
5/17/2020	Average	11	4	53	1013	1029	7	27	49	23	40	9	7	7	43	43	1	Normal(On)
	Min	9	0	26	939	1018	7	25	49	21	40	8	7	7	43	43	1	
	Max	14	497	235	1068	1096	7	28	50	23	42	9	8	7	43	43	1	
5/18/2020	Average	12	4	82	994	1043	7	29	50	20	41	9	7	7	43	43	1	Normal(On)
	Min	9	0	33	976	1020	7	25	48	15	38	8	6	7	43	43	1	
	Max	13	647	223	1040	1175	7	35	50	23	45	10	8	7	43	44	2	



May 2020 Incineration Averages

	TheDate	OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp°C	IDFanTemp°C	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Operating Mode
5/19/2020	Average	12	3	72	1032	1034	7	28	49	21	40	9	8	7	43	43	1	Normal(On)
	Min	10	0	38	1008	1020	7	26	48	17	38	8	7	7	43	42	1	
	Max	13	669	194	1068	1088	7	33	50	23	43	10	8	7	43	43	2	
5/20/2020	Average	12	4	75	1072	1036	7	30	50	20	41	9	8	7	44	43	2	Normal(On)
	Min	10	0	38	1017	1019	7	28	49	16	40	8	7	7	43	42	2	
	Max	14	491	172	1115	1066	7	34	50	22	43	10	9	7	44	43	3	
5/21/2020	Average	14	8	47	963	992	7	29	49	20	39	8	8	7	30	38	2	Normal(On)/Shut-Down/Off/Start-Up
	Min	10	0	-12	749	577	6	21	33	6	27	7	7	7	0	0	0	
	Max	20	504	178	1114	1045	7	36	50	25	42	9	10	9	44	44	4	
5/22/2020	Average	12	3	88	976	1037	7	30	50	20	37	9	8	7	43	40	2	Normal(On)
	Min	8	0	28	781	1019	7	26	49	15	32	8	7	7	43	40	1	
	Max	16	666	239	1050	1082	7	35	50	23	43	9	8	7	43	41	4	
5/23/2020	Average	12	3	73	1043	1030	7	27	49	22	40	9	8	8	40	41	1	Normal(On)
	Min	8	0	28	1000	1019	7	24	48	19	37	9	7	7	27	41	1	
	Max	15	640	174	1082	1054	7	31	50	24	43	10	9	10	43	42	2	
5/24/2020	Average	12	3	71	996	1027	7	29	50	21	40	9	8	7	42	41	1	Normal(On)
	Min	8	0	30	829	1019	7	27	50	17	34	9	7	7	42	41	0	
	Max	15	616	235	1068	1066	7	34	51	23	43	9	8	7	42	42	2	
5/25/2020	Average	11	3	68	955	1030	7	31	51	19	41	9	8	7	42	41	1	Normal(On)
	Min	8	0	15	856	1018	7	27	50	16	34	8	7	7	42	41	0	
	Max	14	373	273	1024	1060	8	35	51	23	44	9	8	7	42	41	1	
5/26/2020	Average	12	7	41	867	1014	7	32	51	19	43	9	8	7	42	41	1	Normal(On)
	Min	6	0	14	659	792	7	27	50	14	40	8	7	7	42	41	1	
	Max	17	646	136	1060	1068	8	37	51	22	47	10	9	7	42	41	2	
5/27/2020	Average	11	7	39	953	1019	7	30	51	21	44	9	8	7	42	41	1	Normal(On)/Shut down/Off/Start-up/Normal(On)
	Min	7	0	0	727	630	7	27	49	16	42	8	6	7	42	41	1	
	Max	20	655	109	1059	1137	7	34	51	23	45	10	8	7	42	42	1	
5/28/2020	Average	12	4	41	940	1023	7	31	51	19	44	9	8	7	42	42	1	Normal(On)
	Min	7	0	15	690	998	7	27	50	16	42	8	7	7	42	41	1	
	Max	15	578	109	1076	1057	7	35	51	23	45	10	8	7	42	42	2	
5/29/2020	Average	14	4	32	911	849	7	42	47	5	40	9	8	7	33	32	2	Normal(On)/Shut down/Off
	Min	9	0	0	455	258	7	31	28	-44	22	8	7	7	0	0	0	
	Max	20	577	142	1084	1113	8	75	51	20	45	10	9	9	42	42	3	
5/30/2020	Average	20	0	0	224	130	8	67	26	-42	20	9	13	9	0	0	0	Off
	Min	20	0	0	106	72	8	25	21	-51	18	9	4	9	0	0	0	
	Max	20	0	0	454	257	8	78	28	-5	22	10	15	9	0	0	0	
5/31/2020	Average	20	0	0	71	53	7	29	24	-6	21	8	4	9	0	0	0	Off
	Min	20	0	0	51	43	7	22	17	-8	13	8	4	9	0	0	0	
	Max	20	0	0	106	72	8	35	29	-4	26	9	4	9	0	0	0	



TheDate	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DailySum	Monthly Total
5/1/2020	0	437	134.5	0	119	0	0	670	481.9	481.2	483.6	432.3	390	670	479	305.5	225.5	483.5	670	300.5	329.5	288	64	0	7445	186724.4
5/2/2020	0	0	0	300.5	407	496.5	167	553.7	0	465.9	506.9	448.1	446.6	483.6	459.9	464	489	484.1	435.3	551.5	0	0	0	0	7159.6	
5/3/2020	0	0	0	72	186	371	0	453.9	565.1	515.1	482.6	471.6	534.4	502.4	504.1	463.1	528.6	0	0	0	0	0	0	0	5649.9	
5/4/2020	0	0	0	247.2	0	314.6	0	515.6	502.8	509.6	545.6	543.1	504.1	503.1	546.1	512.6	265.5	225.5	443.5	0	0	0	359.5	313	6851.4	
5/5/2020	0	519.8	500.9	487.3	505.5	501.4	345.8	461.5	449	445	477.5	433	0	472	0	0	462	469.7	307	307	511.5	440	473	563.5	9132.4	
5/6/2020	0	253	0	0	0	0	0	450	0	0	0	0	0	0	0	494.3	499.5	481.3	292.5	220	146	67.5	123.5	37	3064.6	
5/7/2020	0	405.5	421	353	545.5	118	0	505.4	100	252	487	538	558	526	445.5	0	0	0	0	0	0	0	0	0	5254.9	
5/8/2020	0	0	0	0	0	0	0	0	563.6	432.9	509.6	514.6	503.1	511.6	520.1	562.3	449.4	320.2	427.5	0	0	0	213.5	78	5606.4	
5/9/2020	0	0	442.3	0	0	0	0	481.5	490.5	491.6	469.8	487.3	475	479.5	478	477	470.5	456	103.5	410.5	510	553	266.5	417	7959.5	
5/10/2020	0	436.5	512	461.4	0	601.6	504.4	385.5	506	458.5	488.5	0	476	347.3	487.5	474	512.3	542.5	324	0	321.7	253.6	234	615.5	8942.8	
5/11/2020	0	400.8	487.6	340.2	281	137	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	540.5	2205.1	
5/12/2020	0	510	579	526.6	326	256.2	528	509.9	149.7	251.9	433.3	432.6	433.1	438.1	440.1	463.6	437.1	537.7	450	433	433.5	308.4	434.8	283.1	5995.7	
5/13/2020	71	7	432	431.1	435.5	431.8	437.4	429.1	431.1	432.6	441.6	437.1	456.9	443.1	459.8	433.6	433.6	455.7	472.5	0	0	0	0	0	7572.5	
5/14/2020	511.7	16.5	445.6	0	441.3	0	140.7	480.8	430.6	425.8	428.8	427.1	433.4	437	435.3	542.8	327.5	441.3	295	502.6	507.1	545.6	404.2	0	8620.7	
5/15/2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/16/2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	439.5	453.5	347.5	326.5	331.7	517	0	2415.7	
5/17/2020	0	0	431.5	0	434.2	178.5	206.7	567.9	510.6	501.6	520.1	521.6	516.1	474.4	464.6	504.9	332.4	227.5	440.5	276.5	433.5	459	315	107.5	8424.6	
5/18/2020	0	432.5	336.4	419.5	432	433	340.5	607.4	503.6	506.9	508.1	522.6	351.4	520.3	512.6	505.6	508.1	431	426.5	0	421.9	0	301.6	197.5	9219	
5/19/2020	0	439.8	430.3	406.3	413.4	417.9	207.5	431.3	439.6	449.2	442.7	432.5	442.5	442	450	449.5	443.5	450	201	525.9	525.6	549.1	423.8	182.5	9959.9	
5/20/2020	0	351.4	463.4	523.4	406.4	264.5	357	458.5	443.5	438.3	433.5	442.1	450	441.6	432.4	442.5	430.5	454	133.8	335.4	516.1	658	281.5	156	9313.8	
5/21/2020	0	541	0	71.5	382.5	436.5	108	533.4	254.4	484.1	510.6	472.6	169.2	0	0	0	0	0	0	0	0	0	0	0	3963.8	
5/22/2020	233.5	334.8	408.8	434.8	503.8	264	426.5	501.6	437.9	506.6	455.6	434.6	591.4	527.1	518.6	500.1	512.6	436.7	387	0	0	116.5	533	192.5	9258	
5/23/2020	0	308	439.2	0	0	430.7	0	452.8	458	437	442.3	440.5	449	432	434.1	432.3	434.8	452.3	139.3	444	432	123	329.5	464	7974.8	
5/24/2020	0	659	427.5	0	0	0	0	328.5	482	443.5	498.3	0	446	432.5	448.5	435.5	447.5	443	230	0	0	0	0	0	206.5	
5/25/2020	0	441.3	613.9	340	434	426.5	282	431.3	332.1	149.8	436.7	437.8	0	0	0	435.3	434.5	445.5	467.5	0	78	119.5	183	218.5	6707.2	
5/26/2020	0	435.3	435.2	431.3	177	0	0	0	0	0	0	0	0	0	65.2	454.2	170.7	280.9	352	0	0	0	137	199	3137.8	
5/27/2020	497	413	296	330	538	432.8	239.4	457.4	473.6	300.4	0	0	0	0	0	63.5	490.1	502.1	502.4	0	0	428	190.5	235.5	6389.7	
5/28/2020	0	0	0	0	0	0	111.5	438.5	444.9	447.3	446.3	406.3	0	444	432.5	429.5	439.5	452.5	324.1	0	0	353.4	433.7	445.4	6049.4	
5/29/2020	0	405.7	132.4	523.6	333.7	601.6	414	435.4	439.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3285.9	
5/30/2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/31/2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Carbon Monoxide > 8ppm 4 hour alarm



Carbon Monoxide > 8ppm 4 hour alarm

	Start	Stop		Op.	Stack CO	Stack CO		Actions
Date	Time	Time	Duration	Mode	@ 11% O2	as mg/m ³	Explanation	Taken
5/1/2020	20:00	0:00	4:00	Normal	12.6	14.5	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
5/2/2020	7:00	11:00	4:00	Normal	8.5	9.8	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
5/5/2020	12:00	16:00	4:00	Normal	8.9	10.3	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
5/6/2020	0:00	8:00	8:00	Normal	10.2	11.8	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
5/6/2020	20:30	0:30	4:00	Normal	9.5	11.0	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
5/7/2020	12:30	20:00	7:30	Normal	9.5	11.0	CO spike occurred after a load of waste was charged into the incinerator.	The incinerator was brought to a controlled shutdown. No waste was fed during the period.
5/11/2020	0:00	7:00	7:00	Normal	10.5	12.1	Multitple CO spikes that occurred after waste was charged into the incinerator caused the 4 hour average to exceed 8ppm	The operator reduced his feed rate until the CO levels returned to the normal operating range.
5/12/2020	7:00	11:00	4:00	Normal	8.7	10.0	CO spike occurred after a load of waste was charged into the incinerator.	The incinerator was brought to a controlled shutdown. No waste was fed during the period.

Carbon Monoxide > 8ppm 4 hour alarm

5/15/2020	0:30	4:30	4:00	Normal	1151.5	1328.8	High CO levels were caused by intermittent upper burner failures.	The incinerator was brought to a controlled shut-down.
5/18/2020	7:00	11:00	4:00	Normal	8.6	9.9	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
5/20/2020	20:00	4:00	8:00	Normal	9.6	11.1	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
5/23/2020	20:00	0:00	4:00	Normal	12.2	14.1	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
5/24/2020	13:00	17:00	4:00	Normal	8.4	9.7	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
5/26/2020	0:30	4:30	4:00	Normal	10.2	11.8	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
5/26/2020	15:00	21:00	6:00	Normal	8.8	10.2	Low upper chamber temperatures caused CO spikes to occur which resulted in the 4 hour average exceeding 8ppm	No waste was fed until the upper chamber temperature and CO levels returned to the normal operating range.
5/27/2020	6:00	14:00	8:00	Normal	8	9.2	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
5/27/2020	23:00	3:00	4:00	Normal	12.3	14.2	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.

Carbon Monoxide > 8ppm 4 hour alarm

5/28/2020	22:00	2:00	4:00	Normal	10	11.5	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
5/29/2020	8:30	12:30	4:00	Normal	10	11.5	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level 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
5/1/2020	1:44	12:44	11:00	Normal	8.2	9.5	Incorrect draft settings on start-up contributed to high CO levels.	Maintenance adjusted the draft settings to bring the CO levels back to the normal operating range.
5/8/2020	1:00	10:00	9:00	Normal	24.2	27.9	A large CO spike during startup caused the 12 hour CO average to exceed 8ppm	Maintenance adjusted the draft settings to bring the CO levels back to the normal operating range.
5/11/2020	7:00	19:00	12:00	Normal	9.9	11.4	Multiple CO spikes that occurred after waste was charged into the incinerator caused the 12 hour average to exceed 8ppm	The operator reduced his feed rate until the CO levels returned to the normal operating range.
5/15/2020	2:00	14:00	12:00	Normal	418.3	482.7	High CO levels were caused by intermittent upper burner failures.	The incinerator was brought to a controlled shut-down.

Secondary Chamber Temperature < 1000°C

	Start Time	Stop Time	Duration	Op. Mode	Temp. °C	Explanation	Actions Taken
Date							
5/14/2020	23:11	7:47	8:36	Normal	783	Operator encounter a malfunction of the upper chamber burner.	No waste was fed during this time. 3rd party was called in to repair the burner.
5/26/2020	11:47	14:44	2:57	Normal	965	Low upper chamber temperature was caused by the incinerator sitting idle and a high draft setting.	No waste was fed during this time. Maintenance adjusted the draft setting and the temperature returned to the normal operating range.

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



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

[illegible]

Atomizer Amps < 36

	Start	Stop		Op.	Atom. A	Atom. B		Action
Date	Time	Time	Duration	Mode	amps	amps	Explanation	Taken
5/5/2020	14:52:00	16:53:00	2:01:00	shutdown/Normal	33.6	33.2	The incineator was brought to a shut-down to allow maitenance to make a repair. This cause the atomizer amperage to drop.	No waste was fed during this period. Once the repair was complete the incinerator was put back into normal operating and the amperage returned to the normal operating range.
5/21/2020	12:10:00	16:33:00	4:23:00	Normal/Shutd own	11.1	43.1	The incineator was brought to a shut-down to allow maitenance to make a repair. This cause the atomizer amperage to drop.	No waste was fed during this period.
5/23/2020	8:10:00	11:21:00	3:11:00	Normal	28.7	41.7	Low amperage was caused by a defective oil fitting.	Maitenance repaired the fitting.

TheDate		OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp°C	IDFanTemp°C	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Operating Mode
6/1/2020	Average	20	6	-4	118	351	8	32	27	-5	22	8	4	9	0	0	0	Off /Preheat
	Min	14	0	-12	40	37	7	27	24	-7	19	8	4	9	0	0	0	
	Max	20	100	47	257	807	8	37	31	-2	25	8	5	9	4	4	0	
6/2/2020	Average	12	2	48	709	985	7	34	48	13	43	9	8	7	39	39	0	Preheat/Normal(On)
	Min	7	0	33	223	810	7	28	28	-3	24	8	5	7	4	4	0	
	Max	14	147	141	1027	1048	7	37	51	22	47	10	9	9	41	42	0	
6/3/2020	Average	12	3	63	1056	1034	7	36	49	13	44	9	8	7	42	42	0	Normal(On)
	Min	9	0	28	988	1020	7	33	39	4	41	9	7	7	41	41	0	
	Max	13	568	159	1101	1111	7	39	51	18	47	10	9	7	42	42	0	
6/4/2020	Average	12	6	74	1042	1039	7	35	51	16	45	9	8	7	42	42	0	Normal(On)
	Min	8	1	26	862	1001	7	31	50	10	42	8	7	7	42	42	0	
	Max	16	630	287	1084	1179	7	41	51	19	48	9	9	7	42	42	0	
6/5/2020	Average	12	3	55	963	1026	7	35	51	16	46	9	8	7	39	42	0	Normal(On)
	Min	9	0	21	814	1019	7	33	50	14	44	8	7	6	19	41	0	
	Max	15	567	149	1071	1130	7	37	51	18	48	9	9	7	42	42	0	
6/6/2020	Average	12	3	51	993	1023	7	36	50	14	46	9	8	7	41	41	0	Normal(On)
	Min	10	0	17	820	1000	7	34	50	13	45	8	7	7	41	41	0	
	Max	15	444	183	1107	1057	7	38	51	16	47	10	9	8	41	42	1	
6/7/2020	Average	13	1	46	950	1020	7	37	51	13	45	9	8	7	41	41	0	Normal(On)
	Min	9	0	23	813	982	7	36	50	11	43	8	8	7	41	41	0	
	Max	16	130	128	1092	1101	7	39	51	15	46	10	9	8	41	42	1	
6/8/2020	Average	12	3	63	1004	1024	7	36	51	15	44	9	8	7	41	41	0	Normal(On)
	Min	9	0	29	935	1000	7	33	50	13	43	8	8	7	41	41	0	
	Max	16	517	223	1085	1068	7	38	51	18	47	9	9	8	41	42	1	
6/9/2020	Average	12	3	59	1041	1025	7	37	51	13	46	9	8	7	41	41	0	Normal(On)
	Min	9	0	29	919	990	7	35	51	11	44	9	8	7	41	41	0	
	Max	16	529	183	1098	1111	7	40	51	16	49	9	9	8	41	42	1	
6/10/2020	Average	12	2	52	963	1025	7	39	51	12	47	9	8	7	41	41	1	Normal(On)
	Min	9	0	24	695	995	7	37	51	9	45	8	7	7	41	41	0	
	Max	15	498	160	1049	1105	8	42	54	16	49	10	8	8	41	42	1	
6/11/2020	Average	16	0	24	655	727	7	46	47	1	39	9	9	8	31	31	1	Normal(On)/shut down/Off
	Min	10	0	0	339	83	6	26	36	-44	24	8	8	7	0	0	0	
	Max	20	13	62	900	1023	7	86	51	23	47	9	9	9	41	42	1	
6/12/2020	Average	17	2	15	343	486	6	60	46	-15	29	9	9	8	12	12	0	Off/Startup
	Min	6	0	-13	110	45	5	33	31	-46	19	8	8	7	0	0	0	
	Max	20	615	115	900	1052	7	86	52	23	49	9	9	9	41	42	1	
6/13/2020	Average	13	1	54	882	991	7	39	48	8	44	9	9	8	41	41	1	Startup/Normal(On)
	Min	9	0	25	694	910	7	36	39	0	41	9	8	7	41	41	0	
	Max	16	326	129	1052	1048	7	43	51	14	49	10	10	8	41	42	1	
6/14/2020	Average	13	2	33	962	1022	7	36	50	15	42	9	8	7	41	41	0	Normal(On)
	Min	10	0	-2	872	1002	7	34	50	14	39	9	8	7	41	41	0	
	Max	16	410	142	1027	1053	7	37	51	17	45	9	9	8	41	41	1	
6/15/2020	Average	13	47	44	989	992	7	35	50	16	44	9	8	7	41	41	1	Normal(On)
	Min	8	0	-2	845	608	7	27	49	11	38	7	6	6	41	41	0	
	Max	20	1852	237	1112	1196	7	40	52	22	46	10	9	8	41	41	1	
6/16/2020	Average	12	3	68	1056	1031	7	35	51	15	45	9	8	7	41	41	1	Normal(ON)
	Min	10	0	24	977	1019	7	33	50	12	43	8	8	7	41	41	0	
	Max	15	296	226	1085	1061	7	38	51	18	46	9	9	8	41	42	1	
6/17/2020	Average	12	3	45	960	1020	7	36	49	12	43	9	8	7	41	42	0	Normal(ON)/Shut down/Startup/Normal(On)
	Min	8	0	17	716	986	7	30	35	0	39	8	7	7	41	41	0	
	Max	15	526	125	1100	1051	7	48	55	21	52	13	9	8	42	43	1	
6/18/2020	Average	12	4	55	1078	1032	7	35	51	16	46	8	8	7	42	43	0	Normal(ON)
	Min	9	0	19	1032	1019	7	32	51	15	43	8	7	7	42	42	0	
	Max	15	574	225	1105	1126	7	37	52	19	47	9	8	7	43	43	1	

June 2020 Incineration Averages

TheDate		OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp°C	IDFanTemp°C	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Operating Mode
6/19/2020	Average	12	4	69	1076	1034	7	38	51	13	47	8	8	7	42	43	1	Normal(ON)
	Min	8	0	19	1036	1019	7	35	51	10	45	8	7	7	42	42	0	
	Max	15	535	215	1123	1189	8	42	52	16	49	9	8	7	42	43	1	
6/20/2020	Average	12	2	59	1054	1032	7	40	51	11	46	9	8	7	42	42	1	Normal(ON)
	Min	10	0	20	964	1019	7	37	50	10	45	8	8	7	42	42	0	
	Max	15	217	142	1104	1067	7	42	52	14	48	10	8	7	42	43	1	
6/21/2020	Average	12	2	63	1052	1029	7	40	51	11	47	9	8	7	42	43	1	Normal(ON)
	Min	9	0	18	987	1019	7	37	50	9	45	9	8	7	42	42	0	
	Max	15	330	203	1087	1060	8	43	52	14	49	10	8	7	42	43	1	
6/22/2020	Average	11	4	62	1062	1031	7	40	52	11	47	9	8	7	42	43	1	Normal(ON)
	Min	9	0	18	1039	1019	7	39	51	9	46	8	7	7	42	42	0	
	Max	14	347	179	1082	1086	8	45	54	12	50	10	8	8	42	43	1	
6/23/2020	Average	12	67	64	989	929	7	38	51	13	46	9	8	7	42	43	1	Normal(ON)
	Min	8	0	15	804	427	7	27	49	9	40	8	7	7	42	43	0	
	Max	20	1642	153	1085	1089	8	44	54	22	50	9	8	8	42	43	1	
6/24/2020	Average	11	3	60	1023	1029	7	33	51	17	43	9	8	7	42	43	1	Normal(ON)
	Min	9	0	16	999	1005	7	30	48	14	41	9	7	7	42	43	0	
	Max	13	634	206	1078	1071	7	37	52	21	45	9	8	7	42	43	1	
6/25/2020	Average	12	5	68	1068	1032	7	37	51	14	45	9	8	7	42	43	1	Normal(ON)
	Min	10	0	19	1002	1018	7	32	50	9	42	9	8	7	42	43	1	
	Max	14	440	216	1113	1062	7	42	52	19	48	9	8	7	42	43	1	
6/26/2020	Average	11	3	59	1064	1029	7	36	51	15	45	9	8	7	42	43	1	Normal(ON)
	Min	9	0	20	1003	1019	7	33	51	13	44	9	7	7	42	42	1	
	Max	14	520	195	1099	1060	7	38	52	18	47	10	8	7	44	43	1	
6/27/2020	Average	11	4	65	1060	1029	7	37	51	14	46	9	7	7	42	42	1	Normal(ON)
	Min	9	0	24	1032	1019	7	34	50	11	45	9	6	7	42	42	1	
	Max	14	550	180	1079	1055	8	39	51	17	48	10	8	7	42	43	1	
6/28/2020	Average	12	3	49	1007	1025	7	38	51	13	45	9	8	7	42	42	1	Normal(ON)
	Min	9	0	17	866	987	7	35	50	10	43	8	7	7	42	42	1	
	Max	15	696	214	1085	1056	7	40	51	16	47	10	9	9	42	42	2	
6/29/2020	Average	12	7	51	991	1021	7	36	51	15	45	8	8	7	42	42	1	Normal(ON)/Shut down/Off/Preheat/Normal(ON)
	Min	7	0	0	803	753	7	32	50	10	42	8	7	7	42	42	1	
	Max	20	792	146	1112	1058	7	41	52	19	47	9	9	7	42	42	2	
6/30/2020	Average	12	4	67	1077	1035	7	38	50	12	45	9	8	7	42	42	2	Normal(On)
	Min	9	0	25	1026	1019	7	34	33	-1	39	9	7	7	42	42	1	
	Max	14	516	232	1118	1068	7	43	52	16	48	10	9	8	42	42	2	



June 2020 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	
6/1/2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
6/2/2020	0	0	0	0	0	0	0	0	446.3	443.6	432	447	434.4	435.9	437	435.8	416.3	440	303.5	472.5	474	470.5	91.5	462.9	6643.2		
6/3/2020	0	445.2	476.7	558.5	459.5	482.5	259.5	437.6	440.8	440.8	443.8	433.5	431	434	0	0	106.5	404.5	353	460.4	487.4	422.2	482.5	8459.9			
6/4/2020	0	444.5	566.4	474.5	331	356.7	243.2	490.2	436.1	447.1	459.1	452.2	447.6	478.9	466.6	273	0	0	521.5	0	0	0	0	0	0		6888.6
6/5/2020	0	0	363.2	83.7	468.7	433	504.4	368.9	46	0	142.4	493.6	493.9	475.1	481.6	442.6	477.6	447.4	434.5	0	0	0	427	0	0		6583.6
6/6/2020	0	142.7	0	0	0	0	116.5	442.9	444.5	443.8	441.8	444.4	446.3	433	430	446.4	435.5	436.3	180	293.5	317.5	321	223	240	6679.1		
6/7/2020	0	310	328.5	329	17	578.5	270	0	374.1	0	0	216.5	0	0	0	0	193.3	252.5	71	340.5	349.5	363	340.5	385	4718.9		
6/8/2020	0	521	349.5	304.5	331.2	343.9	183.2	435.7	406	433.7	433.4	430.9	431.6	439.9	431.7	432.6	434.1	439	258.5	120.6	234	395.3	121.9	331.8	8244		
6/9/2020	0	0	660.1	353.1	403	345.5	98	460	478.6	484	444.8	479.6	465	450	485.3	430.8	465	437.4	476.9	0	49	0	299.5	130	7895.6		
6/10/2020	0	435.6	440.2	436.6	395.8	415.1	346	463.4	477.7	450.7	206	448.5	469.5	497.6	253.5	469.6	0	0	0	0	428	18	446.5	18.5	7116.8		
6/11/2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
6/12/2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
6/13/2020	0	0	0	0	0	0	0	0	0	462.6	465.6	462.6	447.1	460.1	476.6	467.1	187.7	472.2	495.5	462.2	117.5	438.9	89.5	329.9	5835.1		
6/14/2020	349.4	435.1	233.7	206.9	436.9	372.6	350	454.1	469.1	457.1	467.1	476.1	470.1	437.6	442.6	449.4	468.1	461.7	551.4	385.4	42.5	262.4	337.9	26	9043.2		
6/15/2020	345.9	454.2	438.2	217.4	469.4	433.3	402.5	495.3	453.3	432.8	0	0	0	451.3	154.9	460.8	463.3	471	511.5	0	0	441.6	0	305.4	7402.1		
6/16/2020	0	434.1	443.8	436.8	431.6	436.8	307	435.5	492.7	410.1	433.3	433	434.5	437	435	435.5	430.3	434	234.5	267.7	470.6	288.9	278.4	72.4	8913.5		
6/17/2020	385.6	21	625	430.5	129	0	0	0	136.5	1.5	0	0	0	0	436	434.5	431	446	289.5	301.9	465.3	508.8	233.8	374.8	5650.7		
6/18/2020	0	211.4	511.5	116.9	175.9	432.8	0	473.3	478.6	480	476.1	437.6	489.4	459.6	467.1	494.9	490.9	495.2	438	444.5	435.3	430.6	434	338.3	9211.9		
6/19/2020	0	443.3	437.3	454.8	439.8	448.9	332.5	470.2	441.3	441.9	368	476	449.7	450.7	445.9	471.4	457.6	478.9	441	117.5	435.5	230.9	434.4	0	9167.5		
6/20/2020	0	0	496.5	475.5	484	328.5	328	440.8	438	438.3	433.2	430.2	447	509	588	315.3	436.3	467	222	634.4	260	59	557	388.5	9176.5		
6/21/2020	0	0	636	56.9	184.6	104.5	111.5	428	435.5	436.5	431	447.3	434	431.5	306.5	0	442	471.5	505	242.1	311	10	613	226	7264.4		
6/22/2020	0	118.4	496.8	292.7	397.5	226.5	32.5	430.5	431.5	433.5	441.5	434	439.5	430	432.3	430.3	439	493.5	170	335	392.5	580.2	405.8	442.4	8725.9		
6/23/2020	0	0	367	22.5	0	0	0	0	0	471.4	469.4	455.5	451.5	459.2	466.1	481.1	511	497.7	349.8	437.5	433	430.6	437.9	152	6893.2		
6/24/2020	411.7	468.8	463	498	507.9	464.5	345.5	451.8	453	514.2	470.2	455.8	472.2	440.5	446.5	475.3	479.9	452	372.5	433.5	432	435	56.2	0	10000		
6/25/2020	456.8	365	431.7	270.9	442.8	442.3	265	411.5	437.5	431	432	439	434.2	488	444.7	487	432.5	442.5	138	364.3	322.6	0	351.3	400.6	9131.2		
6/26/2020	0	15.5	272.4	453.4	122	289.9	0	485	471	504.8	465.5	475.5	430.5	435.5	430.5	432.5	433	455	241	447.3	426.8	563.8	147.5	449.3	8447.7		
6/27/2020	0	0	618.8	457.9	368.4	81.5	196.4	466.5	476.6	458	449	451.8	420.9	471.3	473.3	437.5	474.8	460.6	461.5	434.7	430.4	432.2	228.9	0	8751		
6/28/2020	0	0	0	427.9	437.5	0	0	457.9	456.8	467.3	441.6	460.8	450	0	468.3	452	451	460.6	427.9	430	420.2	370.4	262	0	7342.2		
6/29/2020	0	351.5	188	502.8	0	0	0	0	0	0	0	442.3	511.1	407.6	477.4	432.1	524	456.3	388.8	305.5	429.5	432.7	381.5	0	6231.1		
6/30/2020	449.4	457.6	443.4	440	288.5	642	80	434.5	434.5	440	441	448.8	496	431	442	433.5	436.5	439.5	155	593.3	316.8	457.5	0	0	9200.8		

Carbon Monoxide > 8ppm 4 hour alarm



Carbon Monoxide > 8ppm 4 hour alarm

	Start	Stop		Op.	Stack CO	Stack CO		Actions
Date	Time	Time	Duration	Mode	@ 11% O2	as mg/m ³	Explanation	Taken
6/4/2020	7:30	11:30	4:00	Normal	8.7	10.0	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
6/4/2020	12:00	16:00	4:00	Normal	9.3	10.7	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
6/22/2020	18:00	22:00	4:00	Normal	8.8	10.2	CO spike occurred after a load of waste was charged into the incinerator.	The operator stopped feeding waste until the CO level returned to the normal operating range.
6/23/2020	2:00	9:00	7:00	Normal	223.7	258.1	Low upper chamber temperatures due to an upper chamber burner failure caused large CO spikes.	No waste was fed during this time. A 3rd party was called in to repair the burner.

Carbon Monoxide > 8ppm 12 hour alarm



Carbon Monoxide > 8ppm 12 hour alarm

	Start	Stop		Op.	Stack CO	Stack CO		Actions
Date	Time	Time	Duration	Mode	@ 11% O2	as mg/m ³	Explanation	Taken
6/15/2020	13:58	1:00	11:02	Normal	84.7	97.7	High CO levels at start-up caused the 12 hour average to exceed 8ppm.	Maintenance adjusted the draft settings to bring the CO levels back to the normal operating range.
6/23/2020	3:00	19:00	16:00	Normal	93.9	108.4	Low upper chamber temperatures due to an upper chamber burner failure caused large CO spikes.	No waste was fed during this time. A 3rd party was called in to repair the burner.

Secondary Chamber Temperature < 1000°C

Date	Start Time	Stop Time	Duration	Op. Mode	Temp. °C	Explanation	Actions Taken
6/7/2020	12:38	13:11	0:33	Normal	988	Low upper chamber temperature was caused by the incinerator sitting idle and a high draft setting.	No waste was fed during this time. Maintenance adjusted the draft setting and the temperature returned to the normal operating range.
6/11/2020	0:39	1:14	0:35	Normal	996	Low upper chamber temperature was caused by the incinerator sitting idle and a high draft setting.	No waste was fed during this time. Maintenance adjusted the draft setting and the temperature returned to the normal operating range.
6/11/2020	2:32	12:27	9:55	Normal	984	Low upper chamber temperature was caused by the incinerator sitting idle and a high draft setting.	No waste was fed during this time. Maintenance adjusted the draft setting and the temperature returned to the normal operating range.
6/17/2020	7:24	7:57	0:33	Normal	995	Low upper chamber temperature was caused by the incinerator sitting idle and a high draft setting.	No waste was fed during this time. Maintenance adjusted the draft setting and the temperature returned to the normal operating range.
6/17/2020	13:07	13:37	0:30	Normal	991	Low upper chamber temperature occurred during shutdown.	No waste was fed during this period.
6/23/2020	2:25	8:12	5:47	Normal	615	Operator encounter a malfunction of the upper chamber burner.	No waste was fed during this time. 3rd party was called in to repair the burner.

6/23/2020	9:22	9:53	0:31	Normal	992	Low upper chamber temperature was caused by the incinerator sitting idle and a high draft setting.	No waste was fed during this time. Maintenance adjusted the draft setting and the temperature returned to the normal operating range.
6/29/2020	8:07	8:55	0:48	Normal	991	Low upper chamber temperature occurred during shutdown.	No waste was fed during this period.

Atomizer Amps < 36

	Start	Stop		Op.	Atom. A	Atom. B		Action
Date	Time	Time	Duration	Mode	amps	amps	Explanation	Taken
6/5/2020	7:23:00	11:12:00	3:49:00	Normal	25.3	41.3	Low amperage was due to the unit overheating cue to a faulty oil pump.	Maintenance repaired the oil pump and restarted the atomizer.

Differential from Demister < 10 C



Differential from Demister < 10°C

	Start	Stop		Op.	Differential Temp		Actions
Date	Time	Time	Duration	Mode	Outlet °C	Explanation	Taken
6/2/2020	19:20	0:16	4:56	Normal	8	Low differential temperature was caused by high ambient temperatures at the facility.	Maintenance monitored the differential temperature and cooling tower.
6/3/2020	13:53	17:03	3:10	Normal	6	Low differential temperature caused by lack of reheat steam.	Maintenance trouble shot the lack of steam and adjusted the reheat steam settings.
6/11/2020	8:06	12:06	4:00	Normal	5	Low differential temperature caused by lack of reheat steam.	Maintenance trouble shot the lack of steam and adjusted the reheat steam settings.
6/17/2020	3:52	12:30	8:38	Normal	4	Low differential temperature caused by lack of reheat steam.	Maintenance trouble shot the lack of steam and adjusted the reheat steam settings.
6/30/2020	21:59	0:00	2:01	Normal	3	Low differential temperature caused by lack of reheat steam.	Maintenance trouble shot the lack of steam and adjusted the reheat steam settings.