

Stericycle®

**2022 Q3
INCINERATION
REPORT**



Stericycle, ULC

95 Deerhurst Drive
Brampton, ON
L6T 5R7

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October 27th, 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 third quarter of 2022.

During July 2022 there were 19 occurrences of the 4-hour CO alarm & 4 occurrences of the 12-hour CO alarm. In August 2022 there were 10 occurrences of the 4-hour CO alarm and 0 occurrences of the 12-hour CO alarm. In July 2022 there were 11 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 were 0 occurrences of the 24-hour NOX alarm triggered in Q3 of 2022.

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

Third QUARTER 2022

INCINERATOR QUARTERLY REPORT - SUPPLEMENTAL INFORMATION

- The Emergency Bypass stack was used three (3) times during Q3 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 third quarter of 2022, the incinerator was run by trained Stericycle operators Emilio Perez, Raminderpal Singh, Said M. Said & Lamek Abraha.
- There were no complaints received regarding the operation of the incinerator during the third quarter of 2022.
- Stericycle Inc. operated the incinerator on the following days during the third quarter:

Start-up	Shut Down
06/30/2022 @ 14:40	07/07/2022 @ 12:53
07/07/2022 @ 17:23	07/07/2022 @ 23:11
07/08/2022 @ 03:26	07/08/2022 @ 13:54
07/08/2022 @ 22:51	07/09/2022 @ 19:55
07/10/2022 @ 08:43	07/11/2022 @ 19:21
07/11/2022 @ 23:59	07/12/2022 @ 12:45
07/12/2022 @ 18:49	07/14/2022 @ 02:45
07/14/2022 @ 08:47	07/18/2022 @ 14:20
07/18/2022 @ 18:41	07/19/2022 @ 14:00
07/19/2022 @ 19:56	07/20/2022 @ 01:55
07/20/2022 @ 09:23	07/21/2022 @ 15:43
07/21/2022 @ 15:54	07/22/2022 @ 01:42
07/22/2022 @ 11:53	07/23/2022 @ 16:18
07/24/2022 @ 05:04	07/28/2022 @ 10:03
07/28/2022 @ 17:33	07/31/2022 @ 01:14
07/31/2022 @ 05:49	08/02/2022 @ 21:01
08/03/2022 @ 01:33	08/10/2022 @ 17:15
08/10/2022 @ 21:22	08/11/2022 @ 16:04
08/11/2022 @ 20:39	08/12/2022 @ 18:42
08/12/2022 @ 23:28	08/13/2022 @ 20:06
08/14/2022 @ 00:06	08/15/2022 @ 18:21
08/15/2022 @ 22:32	08/16/2022 @ 20:05
08/17/2022 @ 00:43	07/17/2022 @ 20:12
08/18/2022 @ 00:43	08/18/2022 @ 14:08
08/29/2022 @ 08:44	08/29/2022 @ 21:04

Start-up	Shut Down
08/30/2022 @ 01:24	08/30/2022 @ 23:54
08/31/2022 @ 03:58	09/01/2022 @ 03:04
09/01/2022 @ 09:10	09/02/2022 @ 16:11
09/03/2022 @ 03:11	09/03/2022 @ 12:15
09/03/2022 @ 16:17	09/04/2022 @ 20:45
09/05/2022 @ 08:45	09/13/2022 @ 09:06
09/13/2022 @ 15:44	09/14/2022 @ 20:19
09/15/2022 @ 00:21	09/19/2022 @ 05:56
09/19/2022 @ 15:44	09/19/2022 @ 21:47
09/20/2022 @ 10:27	09/22/2022 @ 06:06
09/22/2022 @ 19:53	09/23/2022 @ 14:53
09/23/2022 @ 19:06	09/25/2022 @ 14:23
09/25/2022 @ 18:35	09/27/2022 @ 12:15
09/27/2022 @ 16:47	09/28/2022 @ 12:49
09/28/2022 @ 17:12	09/29/2022 @ 04:48
09/29/2022 @ 09:26	09/30/2022 @ 10:48
09/30/2022 @ 15:23	

During Q3 of 2022 routine maintenance was performed on the incinerator during the scheduled shutdowns along with the following:

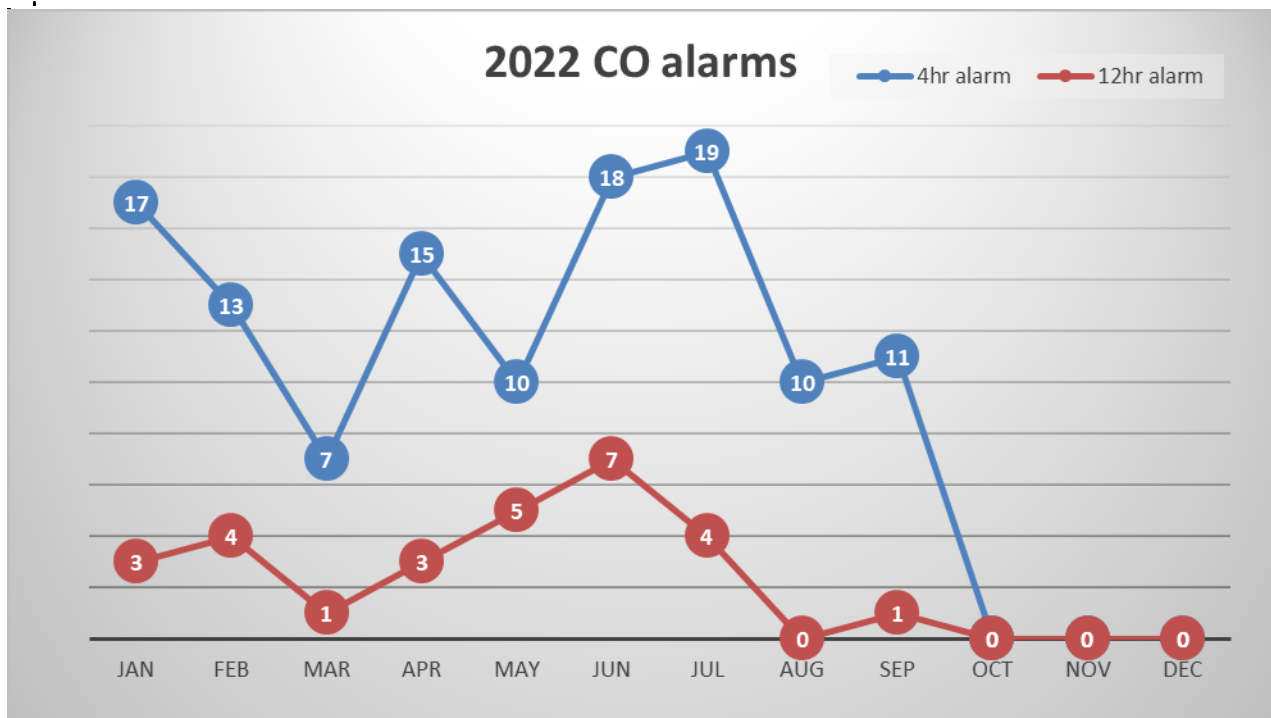
- Replacement of the Carbon in the primary bed.
- Replacement of the HEPA filters in the carbon bed.
- Replacement of the upper and lower rams.
- Rebuild of the refractory in the lower chamber.
- Repair of the steel in the lower chamber
- Replacement of the hydraulics cylinders on the ash hoe

Emergency Bypass Summary

Date	Start Time	End Time	Duration	Emission Volume (m ³)	Reason	Corrective Action
7/23/2022	17:13	20:07	2:54	634.38	Stericycle maintenance found a leak at the flange connection for piping coming into the quench tank. Upon further inspection, maintenance found that bolts came loose and were missing from the flange.	The APC was shut down to prevent damage to the system due to overheating. Maintenance replaced gasket and tightened bolts and the APC system was restarted and the stack cap closed.
7/23/2022	22:17	2:17	4:00	875.00	CPVC pipe cracked above the stainless-steel section at the flange causing the APC system to shut down and the incinerator to go into an emergency bypass.	The incinerator was brought to a controlled shut-down. Maintenance replaced the CPVC section and restarted the incinerator and APC system.
8/31/2022	0:54	0:57	0:03	10.94	The emergency bypass stack opened after 4 short power flickers caused the air compressor to shut down.	Stericycle maintenance re-started the air compressor, and the emergency bypass cap was closed.

CO Alarm Chart Q3 2022

Month	4 Hour CO average alarms	12 Hour CO average alarms
January	17	3
February	13	4
March	7	1
April	15	3
May	10	5
June	18	7
July	19	4
August	10	0
September	11	1
October		
November		
December		



2021 CO alarms vs. 2022 CO alarms

Month	2021		2022	
	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	15	3
May	5	0	10	5
June	5	1	18	7
July	10	0	19	4
August	6	0	10	0
September	8	2	11	1
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 Q3 of 2022.

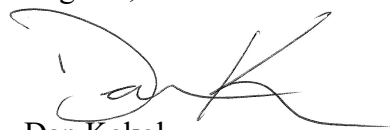
Stericycle is very committed to the full compliance with all conditions of its Provisional Certificate of Approval, throughout the year, whenever a situation of possible non-compliance was identified; immediate actions were taken to ensure full compliance. Stericycle has mechanisms in place to always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



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



July 28, 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 #: 1-1Z5A89

On July 23, 2022, at approximately 17:13 the emergency bypass stack cap was opened due a leaking pipe leading to the quench tank on the Air Pollution Control (APC) system.

As required by conditions 36 and 38(1) (b) & (2) of the above referenced ECA, the incinerator was brought into a controlled shutdown during this time. The emergency bypass stack was open for a duration of two (2) hours and fifty-four (54) minutes. During this period no waste was injected into the incinerator and the upper chamber was maintained at 1000°C by natural gas only.

On July 23, 2022, a call was placed to the Spills Action Control center by Stericycle Facility Manager Conan Fonseca to report the use of the emergency bypass stack. At approximately 17:13 Stericycle maintenance found a leak at the flange connection for piping coming into the quench tank. Upon further inspection, maintenance found that bolts came loose and were missing from the flange. The APC was shut down to prevent damage to the system due to overheating. Maintenance replaced gasket and tightened bolts and the APC system was restarted and the stack cap closed.

During the bypass, approximately 634.38 m³ of flue gas was emitted from 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



July 28, 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 #: 1-1Z5AB6

On July 23, 2022, at approximately 22:17 the emergency bypass stack cap was opened due a burst pipe section leading to the quench tank on the Air Pollution Control (APC) system.

As required by conditions 36 and 38(1) (b) & (2) of the above referenced ECA, the incinerator was brought into a controlled shutdown during this time. The emergency bypass stack was open for a duration of four (4) hours. During this period no waste was injected into the incinerator and the upper chamber was maintained at 1000°C by natural gas only.

On July 23, 2022, a call was placed to the Spills Action Control center by Stericycle Facility Manager Conan Fonseca to report the use of the emergency bypass stack. At approximately 22:17 a CPVC pipe cracked above the stainless-steel section at the flange causing the APC system to shut down and the incinerator to go into an emergency bypass. The incinerator was brought to a controlled shut-down. Maintenance replaced the CPVC section and restarted the incinerator and APC system.

During the bypass, approximately 875 m³ of flue gas was emitted from 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



September 8th, 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 #: 4726-CHT92

On August 31, 2022, at approximately 0:54 the emergency bypass stack cap was opened due four short local power failures (brown outs) that caused the air compressor to shut-down.

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 three (3) 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 August 31, 2022, a call was placed to the Spills Action Control center by Stericycle Facility Manager Conan Fonseca to report the use of the emergency bypass stack. At approximately 0:54 a series of local power brown-outs (four) caused the facility air compressor to shut-down. The short duration of the power flickers did not allow for the back-up generator to come online before local power was restored in under 30 seconds. As a result of the air compressor shutting down the emergency bypass stack cap opened. Stericycle Maintenance re-started the air compressor and shut the emergency bypass stack cap.

During the bypass, approximately 10.94 m³ of flue gas was emitted from 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

September 2nd 2022

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

**Re: Stericycle ULC. – Environmental Compliance Approval for a Waste Disposal Site No. A680324
Notification – Atomizer**

Dear Ms. Broux,

This letter is to notify the MECP that atomizer B was taken out of service at 20:04 on August 30 2022 when damage to the rotary atomizer gears was detected by Stericycle maintenance. Atomizer B will be re-installed in the APC system on September 12 2022.

Stericycle strongly believes that this will not otherwise affect our compliance with the conditions of our Environmental Compliance Approval. The atomizers take out particulate and operating through one unit merely reduces the efficiency (approximately from 95% to 90%), but whatever additional particulate could get through is subsequently removed by the carbon beds & HEPA filters.

Stericycle began running on one rotary atomizer at approximately 04:06 on Wednesday August 31 2022. The maintenance team blanked the intake of the rotary atomizer that is down to force the emission stream through the functioning atomizer. Stericycle will immediately notify the Ministry once the atomizer has been rebuilt & installed. Stericycle will also provide a summary report of the monitored parameters during that period. While operating with only one atomizer, Stericycle will notify the Ministry if we encounter any issues..

Should you have any questions or require additional information, please do not hesitate to contact the undersigned at 905-595-8532.

Sincerely,



Dan Kokol
Operational EHS Specialist
Stericycle ULC
dkokol@stericycle.com

c.c. Jean-Pierre Pepin
Dale Rich
Brian Kirkwood
Conan Fonseca

October 5, 2022

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

**Re: Stericycle ULC. – Environmental Compliance Approval for a Waste Disposal Site No. A680324
Notification – Atomizer**

Dear Ms. Broux,

This letter is to notify the MECP that Stericycle's incinerator has been running on both rotary atomizers as of 19:06 October 4th, 2022. Atomizer B was rebuilt and re-installed into the incinerators APC system. As shown in the attached data, Stericycle did not experience any permit value exceedances due to running on a single atomizer from August 31st, 2022 to October 4th 2022.

Should you have any questions or require additional information, please do not hesitate to contact the undersigned at 905-595-8532.

Sincerely,



Dan Kokol
Operational EHS Specialist
Stericycle ULC
dkokol@stericycle.com

c.c. Jean-Pierre Pepin
Brian Kirkwood
Conan Fonseca
Emeka Onyeka



July 2022 Incineration Averages and Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp	SecTemp	SNCR	DemTemp	CarbTemp	DiffTemp	DFanTemp	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Op Mode
7/1/22	Average	11.51	5.98	37.26	1661.49	1075.49	7.24	34.27	54.45	20.18	119.76	0.00	0.00	7.08	39.48	40.18	0.85	Normal(ON)
	Min	9.04	0.00	8.53	1513.45	1026.03	6.96	27.43	54.39	15.55	115.90	0.00	0.00	7.05	39.04	39.74	0.00	
	Max	13.84	644.83	100.99	1806.16	1188.23	7.55	38.88	54.52	27.00	122.47	0.00	0.00	7.14	39.97	40.70	1.00	
7/2/22	Average	12.51	2.57	32.61	1565.93	1059.36	6.68	30.03	54.14	24.11	117.57	0.00	0.00	7.09	39.38	40.39	0.92	Normal(ON)
	Min	10.26	0.00	9.04	1065.38	994.13	6.25	24.44	53.11	19.67	112.77	0.00	0.00	7.02	38.99	40.01	0.00	
	Max	14.62	658.86	149.09	1840.85	1118.33	7.27	34.59	54.88	28.86	121.51	0.00	0.00	7.21	39.60	40.99	1.00	
7/3/22	Average	12.38	3.11	50.10	1588.17	1045.38	6.45	30.43	54.21	23.77	117.48	0.00	0.00	7.14	39.47	40.55	1.00	Normal(ON)
	Min	9.64	0.00	18.24	1239.90	911.96	6.07	27.31	53.38	19.80	114.04	0.00	0.00	5.74	39.27	40.04	1.00	
	Max	15.97	854.65	122.91	1767.74	1079.64	6.79	34.66	54.54	26.35	121.00	0.00	0.00	8.39	40.06	41.51	1.00	
7/4/22	Average	12.07	4.56	60.06	1713.75	1060.14	6.73	33.84	54.41	20.57	119.03	0.00	0.00	7.09	39.38	40.91	1.00	Normal(ON)
	Min	10.55	0.00	18.55	1630.17	953.78	6.49	32.32	54.27	18.63	117.98	0.00	0.00	7.04	39.27	40.80	1.00	
	Max	15.44	796.64	149.94	1767.23	1084.31	6.99	35.70	54.50	22.04	119.98	0.00	0.00	7.14	39.48	41.06	1.00	
7/5/22	Average	11.75	4.47	60.77	1704.30	1065.33	7.20	34.70	54.28	19.58	116.24	0.00	0.04	7.10	39.34	40.76	0.45	Normal(ON)
	Min	8.47	0.00	0.74	1625.27	999.79	6.79	26.67	52.31	16.86	111.00	0.00	0.00	6.98	38.87	40.47	0.00	
	Max	14.59	862.54	190.49	1766.33	1086.86	7.70	37.54	55.83	27.88	120.95	0.01	14.80	7.25	40.15	41.64	1.00	
7/6/22	Average	11.72	1.73	40.06	1689.18	1066.16	7.02	32.28	54.44	22.16	115.63	0.00	8.18	7.37	40.06	41.48	0.00	Normal(ON)
	Min	10.47	0.00	15.40	1634.95	1037.56	6.81	29.44	53.89	20.67	113.70	0.00	0.00	6.71	39.71	41.03	0.00	
	Max	13.48	676.76	106.97	1725.83	1080.68	7.16	33.76	55.00	25.25	118.38	0.00	14.80	9.10	40.60	42.81	0.00	
7/7/22	Average	11.92	2.74	42.99	1675.06	1055.88	6.89	33.25	54.35	21.09	118.05	0.00	14.80	7.20	40.24	40.62	0.00	Normal(ON)/Shutdown/Off/Preheat/Normal(ON)/Shutdown
	Min	9.05	0.00	0.00	1590.43	586.81	6.51	29.61	53.35	13.93	115.21	0.00	14.80	6.82	34.22	34.12	0.00	
	Max	20.36	548.44	161.87	1739.69	1102.59	7.22	39.46	57.22	24.81	121.00	0.00	14.80	7.71	41.08	41.60	0.00	
7/8/22	Average	14.17	2.28	32.35	1595.40	926.56	7.10	41.16	51.19	10.03	110.71	0.00	7.02	6.90	32.87	32.84	0.10	Shutdown/Off/Preheat/Normal(ON)/Shutdown/Off/Preheat
	Min	8.74	0.00	0.00	975.56	351.88	6.66	27.92	32.62	-43.76	73.17	0.00	0.00	6.16	0.10	0.00	0.00	
	Max	20.39	791.09	144.42	1802.85	1092.40	7.65	77.73	55.02	26.49	120.57	0.00	14.80	7.57	41.17	41.64	1.00	
7/9/22	Average	12.10	2.25	50.01	1659.95	1052.74	6.56	35.27	54.10	18.83	117.00	0.00	13.78	7.30	40.04	40.02	0.65	Preheat/Normal(ON)/Shutdown/Off
	Min	8.19	0.00	17.13	962.80	897.21	6.32	31.26	35.60	-33.87	76.25	0.00	0.00	7.16	6.13	6.15	0.00	
	Max	15.83	870.20	118.34	1801.52	1104.79	7.39	69.47	55.00	23.28	121.30	0.00	14.80	8.20	40.98	40.87	1.00	
7/10/22	Average	15.65	2.31	15.50	1121.63	751.15	6.71	44.30	40.56	-3.74	93.31	0.00	14.80	7.54	22.09	21.59	0.06	Off/Preheat/Normal(ON)
	Min	4.75	0.00	0.00	663.26	207.52	6.09	30.51	25.51	-35.13	62.82	0.00	14.80	7.17	0.01	0.00	0.00	
	Max	20.41	623.19	83.69	1638.84	1077.14	7.19	65.28	54.52	20.05	119.15	0.00	14.80	7.90	40.94	40.37	1.00	
7/11/22	Average	11.84	0.21	48.85	1715.15	1060.17	7.03	35.70	52.30	16.60	118.22	0.00	6.33	7.15	40.84	39.53	0.20	Normal(ON)/Shutdown/Off/Preheat
	Min	10.42	0.00	0.00	1558.52	710.26	6.67	33.33	36.01	-1.56	103.73	0.00	0.00	6.38	35.37	34.18	0.00	
	Max	20.36	12.61	129.65	1800.07	1093.00	7.52	39.60	54.65	21.15	122.04	0.00	14.80	7.36	41.87	39.97	1.00	
7/12/22	Average	14.21	0.41	24.04	1458.12	968.04	7.43	43.27	50.01	6.75	110.68	0.00	0.00	7.44	31.16	31.52	0.03	Preheat/Normal(ON)/Shutdown/Off/Preheat/Normal(ON)
	Min	8.30	0.00	0.00	987.09	478.42	6.80	31.11	34.63	-28.78	79.15	0.00	0.00	6.80	0.10	0.00	0.00	
	Max	20.37	153.66	98.78	1719.44	1084.20	7.98	67.49	57.13	25.76	122.53	0.00	0.00	8.51	40.31	40.90	1.00	
7/13/22	Average	11.60	3.51	47.27	1707.57	1060.90	7.01	36.76	54.46	17.70	118.56	0.00	0.00	7.24	39.70	40.76	0.11	Normal(ON)
	Min	9.73	0.00	17.75	1407.84	976.84	6.76	32.61	54.37	11.88	116.68	0.00	0.00	7.19	39.51	40.48	0.00	
	Max	14.41	856.33	140.69	1773.12	1091.23	7.22	42.57	54.61	21.86	123.18	0.00	0.00	7.30	39.85	40.98	1.00	
7/14/22	Average	14.22	1.95	33.43	1433.54	966.99	6.98	34.61	46.94	12.32	104.77	0.00	0.00	7.46	28.08	28.11	0.00	Normal(ON)/Shutdown/Off/Preheat/Normal(ON)
	Min	8.03	0.00	0.00	995.58	408.92	6.59	29.19	29.37	-12.66	74.16	0.00	0.00	7.16	0.08	0.00	0.00	
	Max	20.39	1266.39	131.31	1737.88	1088.13	7.52	48.17	54.53	24.01	118.94	0.00	0.00	7.92	40.55	40.90	0.00	
7/15/22	Average	11.91	2.14	53.64	1588.94	1065.77	6.76	33.30	52.96	19.66	120.10	2.28	3.56	7.19	40.58	39.27	0.28	Normal(ON)
	Min	9.66	0.00	22.07	1506.45	1031.49	6.34	28.99	46.05	8.40	116.31	0.00	0.00	7.06	40.41	39.06	0.00	
	Max	13.09	660.44	219.50	1675.89	1118.53	7.11	39.94	54.49	25.45	125.18	7.80	8.30	7.40	40.93	39.62	1.00	
7/16/22	Average	12.08	5.33	39.07	1675.79	1059.64	7.03	33.82	51.14	17.32	121.56	6.94	7.64	7.16	40.63	39.20	0.35	Normal(ON)
	Min	10.57	0.00	0.77	1530.56	944.80	6.76	30.75	46.99	10.39	118.88	4.94	7.14	7.03	40.29	38.86	0.00	
	Max	15.02	936.72	79.41	1757.00	1080.44	7.15	37.11	53.85	22.16	123.87	7.54	8.53	7.21	40.94	39.51	1.00	
7/17/22	Average	11.91	1.14	42.94	1702.28	1059.40	7.14	36.15	52.59	16.45	121.98	7.30	7.31	7.19	40.70	39.16	1.00	Normal(ON)
	Min	10.69	0.00	19.66	1664.41	1018.10	6.91	33.58	51.23	12.52	119.70	7.15	7.10	7.15	40.57	38.94	1.00	
	Max	13.22	878.33	106.17	1732.84	1089.06	7.42	38.87	54.12	18.28	123.41	7.36	7.47	7.26	40.88	39.49	1.00	



July 2022 Incineration Averages and Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp	SecTemp	SNCR	DemTemp	CarbTemp	DiffTemp	DFanTemp	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Op Mode
7/18/22	Average	12.07	11.44	51.96	1629.61	1059.69	7.58	38.04	52.83	14.78	121.02	7.22	7.33	7.19	40.22	39.54	1.00	Normal(ON)/Shut
	Min	8.70	0.00	0.00	1251.60	976.17	7.42	34.78	47.95	10.66	117.44	6.26	7.00	7.03	39.33	38.73	0.00	down/Off/Normal
	Max	20.35	1292.32	187.52	1757.86	1089.42	7.74	41.13	56.28	20.26	125.33	7.42	7.59	7.77	40.73	40.06	1.00	I(ON)
7/19/22	Average	12.91	2.31	51.13	1595.16	993.29	7.59	40.19	51.67	11.48	118.14	6.89	7.47	7.19	33.07	36.47	0.67	Normal(ON)/Shut
	Min	6.86	0.00	0.00	1045.83	457.06	7.22	32.90	44.85	-13.75	105.63	5.97	7.17	7.04	0.10	13.01	0.00	down/Off/Preheat
	Max	20.37	829.56	153.17	1747.62	1083.30	8.03	59.87	54.54	18.37	125.18	8.05	7.66	7.46	39.45	40.11	1.00	t
7/20/22	Average	13.08	2.75	42.10	1332.05	907.90	7.85	46.19	50.43	4.24	118.73	6.69	7.47	7.01	19.98	34.01	0.77	Preheat/Shutdown
	Min	7.28	0.00	0.00	847.97	306.58	7.64	35.14	38.34	-39.21	89.11	2.25	5.13	6.02	0.10	0.06	0.00	n/Off/Preheat/Normal
	Max	20.39	654.54	127.16	1563.77	1083.07	8.03	77.54	55.87	17.26	128.99	8.89	9.47	7.80	38.70	40.73	1.00	ormal(ON)
7/21/22	Average	11.80	1.72	39.20	1662.30	1067.13	7.56	36.90	54.46	17.55	118.76	6.68	7.13	6.53	38.70	40.36	1.00	Normal(ON)
	Min	10.43	0.00	0.24	1564.73	1037.96	7.39	34.13	54.38	15.41	116.86	3.83	5.25	5.48	38.25	39.46	1.00	
	Max	13.20	512.32	95.00	1737.82	1085.46	7.79	39.03	54.54	20.30	120.46	8.24	7.88	7.21	39.11	41.09	1.00	
7/22/22	Average	15.18	0.50	27.05	1344.85	867.45	7.26	43.76	43.35	-0.41	102.69	8.25	7.63	6.76	23.88	23.98	0.44	Normal(ON)/Shut
	Min	9.39	0.00	0.00	930.06	314.76	6.78	30.38	32.14	-23.89	80.04	3.99	4.27	6.11	0.10	0.00	0.00	down/Off/Preheat
	Max	20.41	162.40	142.61	1767.36	1078.82	7.69	60.01	54.51	22.97	120.78	11.68	10.89	7.30	40.85	40.68	1.00	t/Normal(ON)
7/23/22	Average	13.73	0.67	55.42	1607.72	1057.36	7.65	44.76	52.92	8.17	117.64	5.45	7.03	6.30	33.80	33.52	0.76	Normal(ON)/Shutdown
	Min	10.10	0.00	0.00	1322.74	935.21	7.24	37.55	45.30	-30.19	98.98	0.83	4.68	5.92	2.79	2.53	0.00	
	Max	20.39	538.54	141.65	1721.90	1085.97	8.44	76.00	54.51	16.94	123.16	7.96	7.60	7.27	40.75	40.56	1.00	
7/24/22	Average	16.96	3.58	18.02	1106.31	867.06	7.73	57.68	41.97	-15.71	94.40	7.10	7.24	6.91	16.14	16.43	0.33	Shutdown/Off/Preheat
	Min	7.30	0.00	0.00	601.09	329.31	7.12	31.03	34.26	-40.95	78.76	5.35	6.87	6.05	0.10	0.00	0.00	Normal(ON)
	Max	20.42	900.90	95.56	1628.88	1079.07	8.44	75.21	54.60	15.60	119.39	8.25	7.83	7.69	40.10	41.48	1.00	N)
7/25/22	Average	12.09	3.43	51.13	1645.21	1064.88	6.94	35.07	53.87	18.80	116.10	6.47	8.08	6.64	39.65	39.68	1.00	Normal(ON)
	Min	11.15	0.00	15.42	1578.77	1005.61	6.61	33.25	50.25	14.76	113.26	4.76	7.44	6.06	39.36	39.04	1.00	
	Max	13.84	789.84	159.36	1702.82	1082.48	7.86	39.31	54.57	20.95	118.99	8.24	9.05	7.05	40.04	40.63	1.00	
7/26/22	Average	12.25	3.89	38.30	1698.80	1059.18	6.80	34.39	49.27	14.88	115.31	7.29	7.57	6.63	39.39	39.52	1.00	Normal(ON)
	Min	10.76	0.00	11.34	1662.99	978.32	6.47	31.56	41.45	6.27	113.05	6.41	3.54	5.64	39.19	39.10	1.00	
	Max	14.45	638.63	99.14	1731.37	1075.24	7.09	36.32	54.22	21.81	117.34	8.56	9.59	7.24	39.65	39.88	1.00	
7/27/22	Average	12.05	1.42	47.26	1694.38	1063.09	7.01	34.41	54.20	19.79	117.36	7.51	6.65	6.44	39.27	40.34	1.00	Normal(ON)
	Min	11.00	0.00	0.00	1579.87	975.10	6.53	32.28	47.07	13.15	114.54	6.89	4.64	6.07	38.97	39.89	1.00	
	Max	15.07	444.58	120.93	1792.82	1086.70	7.44	37.58	54.69	22.18	121.00	10.17	7.63	7.50	39.44	40.54	1.00	
7/28/22	Average	13.04	2.43	47.26	1398.23	950.81	7.34	36.92	52.49	15.57	116.42	7.99	7.33	6.37	36.51	37.44	0.88	Normal(ON)/Shutdown
	Min	8.68	0.00	0.00	969.28	235.19	6.80	27.50	38.80	-32.68	90.96	7.38	7.07	6.10	0.10	0.00	0.00	down/Off/Preheat
	Max	20.37	490.60	124.70	1579.76	1083.33	7.65	71.50	54.61	24.44	123.73	8.61	8.26	7.50	40.74	40.95	1.00	t/Normal(ON)
7/29/22	Average	12.20	2.22	38.26	1635.19	1064.32	6.93	34.88	51.46	16.58	118.62	7.88	7.17	6.39	39.70	39.74	1.00	Normal(ON)
	Min	10.49	0.00	10.43	1456.05	1018.88	6.73	30.86	44.05	11.15	112.03	7.45	7.10	6.27	39.40	39.54	1.00	
	Max	14.20	439.76	133.86	1712.82	1081.93	7.17	37.58	54.50	20.23	123.41	8.17	7.26	6.50	39.80	40.00	1.00	
7/30/22	Average	12.53	3.25	49.86	1729.43	1061.87	6.97	35.15	54.12	18.97	120.24	7.20	7.26	6.31	39.69	39.93	1.00	Normal(ON)
	Min	10.81	0.00	15.35	1644.77	982.29	6.77	30.86	47.59	15.09	113.90	6.29	7.15	6.20	36.98	39.64	1.00	
	Max	14.44	968.04	143.52	1835.69	1105.57	7.21	38.79	54.53	23.42	122.92	7.92	7.44	6.45	40.33	40.15	1.00	
7/31/22	Average	12.62	2.45	57.00	1709.58	1052.62	7.18	36.38	54.41	18.02	121.12	7.30	7.31	6.21	39.93	39.90	1.37	Normal(ON)/Shutdown
	Min	11.01	0.00	0.00	1498.16	561.11	6.66	24.44	53.89	15.86	114.00	5.08	7.02	6.10	39.65	39.63	1.00	down/Off/Preheat
	Max	20.36	731.81	130.61	1751.00	1088.89	7.42	38.58	54.87	29.44	122.41	8.15	7.55	6.60	40.13	40.09	2.00	t/Normal(ON)

July 2022 Incineration Feed Log

TheDate	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DailySum	Monthly Sum	
01-Jul-22	512.50	554.30	549.80	548.80	537.20	544.00	45.80	543.00	510.10	564.20	508.50	518.60	527.60	534.90	510.00	383.20	333.20	453.00	322.00	222.90	250.10	253.50	272.80	0.00	10000.0	253483.4	
02-Jul-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	501.30	506.70	509.60	504.10	522.00	500.60	519.90	502.40	517.30	248.20	504.00	502.00	429.70	516.90	515.20	0.00		7299.9
03-Jul-22	501.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.20	520.30	504.00	517.00	503.70	508.40	510.80	500.20	251.60	514.20	503.20	503.80	501.30	301.90	6705.4		
04-Jul-22	500.00	0.00	0.00	0.00	497.30	405.50	200.20	503.30	515.10	496.40	499.40	445.00	509.70	522.50	500.10	500.90	501.10	505.60	300.60	551.20	554.60	554.60	535.70	302.40	9901.2		
05-Jul-22	500.10	501.70	551.60	501.90	501.70	502.50	110.70	564.50	201.80	0.00	258.50	513.30	231.80	556.10	561.60	552.10	553.10	570.20	281.70	399.10	418.40	410.70	369.30	386.10	9998.5		
06-Jul-22	552.10	457.10	552.00	544.10	552.70	550.60	269.70	503.60	542.10	550.30	560.60	565.40	552.30	504.60	258.50	552.30	551.30	572.00	244.50	389.30	174.90	0.00	0.00	0.00	10000.0		
07-Jul-22	549.80	553.20	630.90	471.90	546.40	552.40	199.80	481.70	405.50	505.30	510.00	502.00	500.80	0.00	0.00	0.00	0.00	198.70	329.80	604.50	637.30	552.00	575.50	540.90	9848.4		
08-Jul-22	0.00	0.00	0.00	0.00	0.00	410.00	252.50	390.90	531.90	495.50	350.40	501.80	401.30	506.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3840.7		
09-Jul-22	0.00	452.20	498.00	223.50	450.40	131.40	205.20	588.20	489.20	446.90	421.90	403.70	411.80	313.20	337.60	362.50	364.50	548.00	584.00	624.90	0.00	0.00	0.00	0.00	7857.1		
10-Jul-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	643.70	141.00	0.00	0.00	0.00	0.00	123.20	500.10	500.30	503.70	503.50	281.00	3196.5		
11-Jul-22	500.30	500.70	512.00	505.00	454.90	519.10	328.10	489.80	191.10	550.30	491.00	559.60	550.10	571.60	441.90	550.40	568.80	555.20	602.90	71.20	0.00	0.00	0.00	0.00	9514.0		
12-Jul-22	0.00	0.00	0.00	407.00	501.10	501.30	205.00	506.00	552.60	557.10	552.30	552.60	579.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	502.10	255.20	5671.6			
13-Jul-22	500.90	502.20	527.30	505.20	587.00	502.00	16.20	552.50	512.60	508.70	522.00	511.40	0.00	106.80	25.20	561.70	589.20	500.40	182.50	273.70	500.80	503.80	577.00	426.00	9995.1		
14-Jul-22	500.00	501.40	510.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	463.20	506.60	511.00	508.90	291.00	551.40	271.30	556.30	597.60	201.70	5970.9		
15-Jul-22	501.70	499.50	377.10	219.80	578.40	329.50	467.10	506.00	409.60	506.80	504.00	364.90	363.20	505.30	511.80	658.00	295.50	518.10	218.40	451.90	453.80	306.80	452.80	0.00	10000.0		
16-Jul-22	501.30	501.80	500.40	505.10	493.70	504.70	333.50	359.10	507.40	528.40	507.60	0.00	502.40	507.20	610.70	453.00	0.00	0.00	0.00	0.00	504.80	502.00	503.40	300.70	9127.2		
17-Jul-22	506.10	500.60	505.90	500.30	516.20	501.60	154.40	528.20	499.20	511.30	505.50	505.80	506.40	503.90	514.20	511.60	502.70	407.00	121.20	310.50	304.60	307.90	201.80	73.10	10000.0		
18-Jul-22	503.80	555.40	456.40	502.90	599.80	502.30	662.10	442.90	508.40	135.20	68.60	196.40	515.60	522.80	187.80	0.00	0.00	0.00	0.00	353.80	556.20	553.70	503.20	208.40	8535.7		
19-Jul-22	505.70	507.30	500.20	501.80	500.70	546.60	100.80	546.10	604.60	562.80	555.10	574.10	506.40	500.60	173.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.50	7286.5		
20-Jul-22	306.60	500.40	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	507.00	559.90	286.40	431.20	559.40	570.90	551.10	556.90	553.00	552.50	555.00	549.30	270.90	7319.5		
21-Jul-22	500.40	502.90	508.60	501.60	506.80	508.60	249.40	502.70	506.20	504.20	508.70	529.40	510.90	502.00	497.20	587.90	403.40	502.20	303.20	199.40	208.20	198.70	160.30	97.10	10000.0		
22-Jul-22	551.60	564.10	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	283.30	212.90	329.10	506.20	514.60	203.00	3164.8			
23-Jul-22	303.30	501.50	504.50	505.60	502.30	505.20	0.00	551.80	551.90	564.50	567.10	572.40	551.00	551.50	575.90	555.60	552.10	0.00	0.00	0.00	0.00	363.00	260.60	0.00	9039.8		
24-Jul-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	607.60	490.60	147.40	501.60	500.00	513.80	503.40	216.00	3480.4		
25-Jul-22	537.50	499.40	506.80	502.50	498.00	497.60	205.20	564.00	592.50	558.00	551.20	593.80	553.50	560.00	0.00	563.60	553.30	557.40	517.30	132.10	138.30	178.20	91.80	0.00	9952.0		
26-Jul-22	502.20	504.80	510.30	573.70	599.20	497.60	119.80	500.40	500.60	506.40	504.20	508.10	512.60	506.80	503.20	504.20	504.20	511.10	312.70	230.10	488.10	99.70	0.00	0.00	10000.0		
27-Jul-22	505.30	503.30	404.70	130.00	0.00	0.00	137.30	457.30	511.90	510.70	503.30	504.40	508.00	551.80	459.20	503.90	422.60	256.90	327.60	654.80	590.90	630.40	501.10	266.70	9842.1		
28-Jul-22	607.60	604.30	502.70	502.90	386.10	511.10	188.40	446.00	551.60	551.20	439.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.50	503.60	505.20	517.00	505.50	7337.2			
29-Jul-22	505.80	670.00	503.60	511.60	510.20	534.80	235.70	366.10	501.30	503.80	501.80	496.80	382.70	526.00	580.70	319.60	510.50	346.20	234.90	563.50	108.00	0.00	525.40	56.60	9995.6		
30-Jul-22	558.40	556.80	552.20	550.70	551.40	559.10	219.00	489.20	385.10	149.10	536.10	498.70	502.30	507.70	583.30	502.00	503.80	509.50	202.40	202.70	312.40	307.10	215.20	45.80	10000.0		
31-Jul-22	481.60	336.40	0.00	0.00	0.00	0.00	101.80	527.50	501.00	472.40	496.20	0.00	501.30	536.30	493.40	508.80	501.60	504.60	233.40	500.60	501.80	401.30	501.00	502.30	8603.3		



Stericycle®

O2 6 minute average < 7.5

O2 < 7.5

	Start	Stop		Op.	Stack		Actions
Date	Time	Time	Duration	Mode	O2 %	Explanation	Taken
7/20/2022	13:21	13:32	0:11	Normal	7.3	Low O2 % was caused by a O2 drop during a CO spike.	The operator reduced his feed rate until the O2% returned to the normal operating range.
7/24/2022	18:33	18:35	0:02	Normal	7.4	Low O2 % was caused by a O2 drop during a CO spike.	The operator reduced his feed rate until the O2% 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
7/2/2022	1:00	7:00	6:00	Normal	8.5	9.8	High 12 hour CO average cause by multiple spikes in the preceding hours	The operator reduced the feed rate until the CO level returned to the normal operating range.
7/4/2022	2:00	3:00	1:00	Normal	8.6	9.9	High 12 hour CO average cause by multiple spikes in the preceding hours	The operator reduced the feed rate until the CO level returned to the normal operating range.
7/16/2022	16:00	19:00	3:00	Normal	8.01	9.2	High 12 hour CO average cause by multiple spikes in the preceding hours	The operator reduced the feed rate until the CO level returned to the normal operating range.
7/18/2022	11:00	4:00	17:00	Normal	28.14	32.5	High 12 hour CO average cause by multiple spikes in the preceding hours	The operator reduced the feed rate until the CO level 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
7/1/2022	23:00	4:00	5:00	Normal	16.8	19.4	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
7/3/2022	0:00	2:00	2:00	Normal	9.3	10.7	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
7/3/2022	16:00	22:00	6:00	Normal	10.9	12.6	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
7/5/2022	17:00	19:00	2:00	Normal	9.7	11.2	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
7/9/2022	20:01	0:00	3:59	Normal	10	11.5	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
7/10/2022	13:00	17:00	4:00	Normal	12.1	14.0	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
7/13/2022	12:00	16:00	4:00	Normal	9.6	11.1	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
7/14/2022	5:30	7:00	1:30	Shutdown	8.1	9.3	High CO average caused by a CO spike that occurred due to the cycling of the rams during the shut-down process	No waste was fed at this time. The incinerator was brought to a controlled shutdown.

Carbon Monoxide > 8ppm 4 hour alarm

7/15/2022	6:30	11:00	4:30	Normal	9.2	10.6	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
7/16/2022	12:00	20:00	8:00	Normal	11.2	12.9	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
7/18/2022	11:00	19:00	8:00	Normal	53	61.2	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
7/19/2022	16:00	19:00	3:00	Shutdown	9.4	10.8	High CO average caused by a CO spike that occurred due to the cycling of the rams during the shut-down process	No waste was fed at this time. The incinerator was brought to a controlled shutdown.
7/20/2022	13:30	18:00	4:30	Normal	9.4	10.8	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
7/23/2022	22:30	3:00	4:30	Shutdown	21.2	24.5	High CO average caused by a CO spike that occurred due to the cycling of the rams during the shut-down process	No waste was fed at this time. The incinerator was brought to a controlled shutdown.
7/25/2022	1:30	6:00	4:30	Normal	11.2	12.9	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
7/26/2022	3:30	6:00	2:30	Normal	8.8	10.2	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
7/28/2022	23:08	3:00	3:52	Normal	10.3	11.9	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.

Carbon Monoxide > 8ppm 4 hour alarm

7/30/2022	21:01	1:00	3:59	Normal	10.8	12.5	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
7/31/2022	2:01	6:00	3:59	Shutdown	9.7	11.2	High CO average caused by a CO spike that occurred due to the cycling of the rams during the shut-down process	No waste was fed at this time. The incinerator was brought to a controlled shutdown.

Secondary Chamber Temperature < 1000°C

Date	Start Time	Stop Time	Duration	Op. Mode	Temp. °C	Explanation	Actions Taken
7/23/2022	23:29	1:59	2:30	Shutdown	901	Low upper chamber temp caused by an incorrect draft setting during shutdown due to a bypass event.	No waste was fed at this time. The incinerator was brought to a controlled shutdown.
7/31/2022	4:28	5:02	0:34	Shutdown	979	Low upper chamber temp caused by an incorrect draft setting during shutdown.	No waste was fed at this time. 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
7/25/2022	9:41	13:28	3:47	Normal	5.58	Low pH levels were caused by a pH pump malfunction.	Maintenance reset and reprimed the pH pumps.

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



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

	Start	Stop		Op.	Condenser		Action
Date	Time	Time	Duration	Mode	pH	Explanation	Taken
7/26/2022	20:18	1:01	4:43	Normal	4.92	Low pH levels were caused by an pH pump malfunction.	Maintenance reset the and reprimed the pH pump.
7/27/2022	1:18	7:55	6:37	Normal	5.3	Low pH levels were caused by an pH pump malfunction.	Maintenance reset the and reprimed the pH pump.

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
7/23/2022	17:32:00	25:58:00	8:26:00	Normal	13.3	13.1	Low amperage occurred during shutdown of the APC system due to a quench tank failure.	The incinerator was brought to a controlled shutdown.

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
7/20/2022	1:56	5:55	3:59	Shutdown	6.6	Low differential temperature was a result of the cooling tower overheating.	The incinerator was brought to a controlled shutdown.



August 2022 Incineration Averages and Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp	SecTemp	SNCR	DemTemp	CarbTemp	DiffTemp	IDFanTemp	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	OpMode
8/1/2022	Average	12.34	1.67	58.33	917.85	1062.73	7.38	38.36	54.49	16.13	50.01	8.07	7.28	6.16	39.95	39.82	1.66	Normal(ON)
	Min	10.97	0.00	24.54	896.20	1028.11	7.00	34.84	54.40	12.73	48.34	7.97	7.22	6.00	39.83	39.59	1.00	
	Max	13.59	448.36	128.09	944.08	1085.46	7.72	41.91	54.66	19.61	51.55	8.15	7.36	6.27	40.08	40.08	2.00	
8/2/2022	Average	12.16	2.73	74.89	922.65	1068.86	7.16	34.96	54.25	19.29	48.76	7.97	7.25	6.22	40.14	39.20	1.05	Normal(ON)/Shutd own
	Min	10.61	0.00	23.31	872.46	1039.18	6.53	28.39	53.05	13.85	47.28	7.61	7.12	6.03	39.70	38.97	1.00	
	Max	13.26	814.17	189.17	981.12	1087.06	7.73	40.51	54.58	24.98	50.91	8.29	7.36	6.36	40.42	39.70	2.00	
8/3/2022	Average	12.80	2.75	48.24	888.90	1054.61	7.09	36.96	53.08	16.13	46.66	7.60	7.21	6.39	35.40	35.99	0.97	Shutdown/Off/Preh eat/Normal(ON)
	Min	9.59	0.00	0.00	764.51	777.71	6.40	27.70	43.36	-15.08	29.12	6.93	7.07	6.11	11.64	11.39	0.00	
	Max	20.37	605.65	131.73	962.85	1081.17	7.68	58.52	55.00	26.00	51.14	8.01	7.35	6.68	40.21	39.93	2.00	
8/4/2022	Average	12.30	1.87	58.50	914.39	1069.61	7.74	37.78	54.50	16.72	50.34	7.48	7.23	6.27	38.95	39.84	1.77	Normal(ON)
	Min	11.22	0.00	24.16	880.98	1035.89	7.55	35.85	53.95	15.35	49.31	7.09	7.12	5.74	38.83	39.71	1.00	
	Max	13.51	803.84	125.86	943.70	1089.77	7.93	39.39	54.89	18.64	51.28	7.72	7.39	6.55	39.05	40.03	2.00	
8/5/2022	Average	12.40	1.12	51.95	903.61	1062.66	7.39	36.84	53.08	16.25	50.51	7.67	7.27	6.24	39.93	39.75	1.95	Normal(ON)
	Min	10.59	0.00	16.77	869.20	974.16	7.14	32.45	50.22	13.45	48.55	7.44	7.17	6.17	38.89	39.51	1.00	
	Max	14.60	648.75	122.55	945.80	1101.37	7.57	40.44	54.60	21.48	52.44	7.78	7.33	6.33	40.25	39.91	2.00	
8/6/2022	Average	12.43	2.02	61.52	940.37	1054.64	7.62	37.35	54.76	17.41	50.20	7.36	7.23	6.31	40.11	39.66	2.00	Normal(ON)
	Min	9.44	0.00	0.00	901.14	771.83	7.13	32.57	53.74	13.05	48.55	7.23	7.11	6.23	39.86	39.37	1.00	
	Max	20.28	746.22	206.46	980.82	1084.63	8.00	41.51	55.91	21.95	51.62	7.46	7.31	6.48	40.30	39.83	3.00	
8/7/2022	Average	12.46	1.49	43.98	931.93	1060.44	7.95	38.70	55.24	16.54	51.15	7.25	7.23	6.34	39.84	39.50	2.00	Normal(ON)
	Min	10.85	0.00	13.74	897.17	1020.09	7.74	37.34	54.47	15.17	50.18	7.21	7.14	6.23	39.62	39.31	2.00	
	Max	13.95	700.65	163.78	951.62	1079.20	8.13	39.89	56.33	17.65	52.42	7.32	7.28	6.53	40.14	39.75	2.00	
8/8/2022	Average	12.85	8.27	47.06	881.10	1044.87	7.94	38.60	54.73	16.12	50.37	7.21	7.28	6.28	39.66	39.29	2.14	Normal(ON)
	Min	10.38	0.00	0.00	695.96	655.68	7.70	33.42	52.80	12.96	48.74	6.91	7.00	6.16	39.41	39.13	2.00	
	Max	20.37	3923.70	212.10	958.65	1081.04	8.10	42.08	55.89	21.02	51.47	7.56	7.44	6.51	39.80	39.41	3.00	
8/9/2022	Average	12.52	1.75	44.53	921.21	1064.98	7.01	34.59	53.81	19.22	47.73	7.22	7.30	6.36	39.61	39.26	2.58	Normal(ON)
	Min	11.62	0.00	21.16	894.08	1035.19	6.81	31.37	51.42	16.24	46.52	6.72	7.22	6.19	39.39	39.07	2.00	
	Max	13.80	701.63	109.41	951.52	1090.92	7.70	37.40	54.50	23.07	49.05	7.83	7.42	6.46	39.78	39.38	3.00	
8/10/2022	Average	12.46	4.03	59.35	919.14	1061.39	6.95	34.79	51.27	16.48	46.43	9.01	7.75	6.54	39.64	39.32	1.20	Normal(ON)/Shutd own/Off/Preheat/N ormal(ON)
	Min	10.32	0.00	0.00	863.22	826.43	6.70	33.70	46.24	10.88	44.43	7.68	7.20	6.34	39.46	39.08	1.00	
	Max	20.27	680.65	144.15	965.50	1083.09	7.23	36.85	54.42	20.30	48.76	10.58	8.57	6.96	39.76	39.51	3.00	
8/11/2022	Average	12.52	1.71	50.32	924.45	1053.70	6.84	32.98	52.94	19.96	48.09	9.95	8.34	7.06	39.51	39.35	1.00	Normal(ON)/Shutd own/Off/Preheat/N ormal(ON)
	Min	10.90	0.00	0.00	873.55	607.52	6.39	26.41	51.28	16.43	46.23	9.81	8.14	6.81	39.22	39.08	1.00	
	Max	20.37	357.23	165.47	1016.65	1103.30	7.17	36.45	54.50	25.56	49.19	10.19	8.78	7.26	39.72	39.54	1.00	
8/12/2022	Average	12.90	3.35	45.22	915.92	1047.94	6.44	31.69	54.20	22.51	47.82	9.74	8.20	7.07	39.42	39.30	1.02	Normal(ON)/Shutd own/Off/Preheat
	Min	11.55	0.00	0.00	770.99	487.69	5.94	23.28	51.97	17.23	45.89	9.49	7.83	7.01	39.26	39.08	1.00	
	Max	20.33	3226.30	116.81	947.81	1077.98	6.62	34.81	54.51	31.04	48.89	10.32	8.90	7.26	39.54	39.72	2.00	
8/13/2022	Average	12.42	3.21	36.34	914.13	1060.71	6.38	31.03	53.81	22.78	48.29	9.42	8.30	7.18	39.24	39.14	1.60	Preheat/Normal(O N)/Shutdown
	Min	10.33	0.00	14.94	724.22	1002.79	5.94	23.21	52.33	19.04	45.85	8.82	7.94	7.00	38.93	38.88	1.00	
	Max	14.90	777.49	99.13	963.57	1119.67	6.70	35.28	54.52	31.11	50.45	10.35	8.94	7.50	39.40	39.37	2.00	
8/14/2022	Average	12.63	2.49	34.12	951.51	1059.38	6.71	33.87	54.41	20.54	49.46	9.05	8.25	7.19	39.26	39.17	1.44	Shutdown/Off/Preh eat/Normal(ON)
	Min	11.51	0.00	0.00	937.37	852.26	6.51	32.71	54.21	18.90	48.87	8.72	7.98	6.94	39.08	38.95	1.00	
	Max	20.28	1005.77	83.90	969.25	1082.08	6.92	35.56	54.50	21.63	50.06	9.41	8.56	7.63	39.43	39.38	2.00	
8/15/2022	Average	12.88	5.14	45.72	946.55	1052.68	6.82	34.34	53.09	18.75	48.90	9.24	7.75	6.83	39.48	39.39	2.16	Normal(ON)/Shutd own/Off/Preheat
	Min	10.24	0.00	0.00	910.47	679.63	6.63	32.85	48.92	13.83	45.54	8.87	7.42	6.65	39.24	39.13	1.00	
	Max	20.36	882.60	122.81	982.50	1087.36	6.98	35.65	54.50	21.16	50.08	9.64	8.17	7.09	39.67	39.66	3.00	
8/16/2022	Average	12.66	2.53	54.94	930.14	1068.51	7.02	35.81	53.25	17.44	46.53	9.47	7.34	6.60	39.37	39.29	1.00	Preheat/Normal(O N)/Shutdown
	Min	11.20	0.00	11.79	875.32	1009.49	6.78	32.76	50.10	13.26	43.90	8.49	7.07	6.40	39.28	39.15	1.00	
	Max	14.87	823.84	143.88	963.25	1146.59	7.26	42.20	56.11	20.20	47.98	9.68	8.05	7.05	39.70	39.45	1.00	
8/17/2022	Average	12.68	4.69	50.15	884.62	1049.15	7.03	35.51	54.25	18.74	47.68	9.28	7.51	6.82	39.31	39.21	1.19	Shutdown/Off/Preh eat/Normal(ON)/Sh utdown
	Min	9.12	0.00	0.00	746.22	463.39	6.70	29.07	51.10	16.18	45.84	8.82	7.16	6.46	39.20	39.10	1.00	
	Max	20.37	4101.90	239.92	938.04	1096.73	7.31	38.30	54.68	25.28	48.53	9.81	8.28	7.12	39.41	39.32	2.00	



August 2022 Incineration Averages and Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp	SecTemp	SNCR	DemTemp	CarbTemp	DiffTemp	IDFanTemp	QuenchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	OpMode
8/18/2022	Average	14.52	3.00	30.77	830.90	890.37	7.20	40.07	51.67	11.60	44.79	9.16	7.72	6.61	32.23	32.13	1.47	Shutdown/Off/Preheat/Normal(ON)/Shutdown/Off
	Min	9.65	0.00	0.00	468.50	168.46	6.78	30.26	34.78	-26.69	29.65	8.34	7.20	5.82	0.10	0.00	0.00	
	Max	20.39	2747.88	156.60	940.64	1098.57	8.32	66.04	54.68	24.13	48.75	11.00	8.40	7.11	39.31	39.53	2.00	
8/19/2022	Average	20.25	0.00	0.00	202.29	82.72	8.38	40.44	47.66	7.22	31.18	11.90	8.43	5.92	0.10	0.00	0.00	Off
	Min	20.07	0.00	0.00	68.14	52.68	8.28	30.91	34.55	-23.45	25.69	11.00	8.40	5.78	0.08	0.00	0.00	
	Max	20.42	0.00	0.00	467.78	168.13	8.53	58.23	54.77	18.32	35.01	13.12	8.50	6.07	0.10	0.00	0.00	
8/20/2022	Average	20.25	0.00	0.00	49.83	45.70	8.41	33.27	50.23	16.96	29.84	13.45	8.46	6.08	0.09	0.00	0.00	Off
	Min	20.10	0.00	0.00	44.46	41.00	8.28	30.40	48.13	16.03	26.55	13.12	8.40	5.87	0.04	0.00	0.00	
	Max	20.40	0.00	0.00	68.07	53.29	8.60	36.21	53.30	18.33	33.38	13.63	8.50	6.26	0.10	0.00	0.00	
8/21/2022	Average	20.25	0.00	0.00	41.66	38.50	8.37	31.53	48.33	16.80	28.40	13.71	8.52	6.50	0.09	0.00	0.00	Off
	Min	20.07	0.00	0.00	37.78	33.18	8.27	30.02	46.43	16.35	26.49	13.64	8.50	6.18	0.07	0.00	0.00	
	Max	20.44	0.00	0.00	46.32	41.68	8.59	33.27	49.83	17.64	30.48	13.75	8.68	6.72	0.10	0.00	0.00	
8/22/2022	Average	20.25	0.00	0.00	39.20	37.32	8.27	31.20	48.15	16.95	28.08	13.71	8.54	6.63	0.08	0.00	0.00	Off
	Min	20.07	0.00	0.00	35.89	33.18	7.91	29.88	46.43	16.35	26.42	13.64	8.50	6.18	0.05	0.00	0.00	
	Max	20.44	0.00	0.00	46.32	41.68	8.59	33.27	49.83	18.39	30.48	13.75	8.68	6.76	0.10	0.00	0.00	
8/23/2022	Average	20.25	0.00	0.00	39.20	37.32	8.27	31.20	48.16	16.95	28.09	13.71	8.54	6.63	0.08	0.00	0.00	Off
	Min	20.07	0.00	0.00	35.89	33.18	7.91	29.88	46.43	16.35	26.42	13.64	8.50	6.18	0.05	0.00	0.00	
	Max	20.44	0.00	0.00	46.32	41.68	8.59	33.27	49.83	18.39	30.48	13.75	8.68	6.76	0.10	0.00	0.00	
8/24/2022	Average	20.25	0.00	0.00	39.20	37.31	8.27	31.21	48.16	16.96	28.09	13.71	8.54	6.63	0.08	0.00	0.00	Off
	Min	20.07	0.00	0.00	35.89	33.18	7.91	29.88	46.43	16.35	26.42	13.64	8.50	6.18	0.05	0.00	0.00	
	Max	20.44	0.00	0.00	46.32	41.68	8.59	33.27	49.83	18.39	30.48	13.75	8.68	6.76	0.10	0.00	0.00	
8/25/2022	Average	20.25	0.00	0.00	39.19	37.31	8.27	31.21	48.16	16.96	28.09	13.71	8.54	6.63	0.08	0.00	0.00	Off
	Min	20.07	0.00	0.00	35.89	33.18	7.91	29.88	46.43	16.35	26.42	13.64	8.50	6.18	0.05	0.00	0.00	
	Max	20.44	0.00	0.00	46.32	41.68	8.59	33.27	49.83	18.39	30.48	13.75	8.68	6.76	0.10	0.00	0.00	
8/26/2022	Average	20.25	0.00	0.00	39.19	37.31	8.27	31.21	48.16	16.96	28.10	13.71	8.54	6.63	0.08	0.00	0.00	Off
	Min	20.07	0.00	0.00	35.89	33.18	7.91	29.88	46.43	16.35	26.42	13.64	8.50	6.18	0.05	0.00	0.00	
	Max	20.44	0.00	0.00	46.32	41.68	8.59	33.27	49.83	18.39	30.48	13.75	8.68	6.76	0.10	0.00	0.00	
8/27/2022	Average	20.25	0.00	0.00	39.19	37.31	8.27	31.21	48.17	16.96	28.10	13.71	8.54	6.63	0.08	0.00	0.00	Off
	Min	20.07	0.00	0.00	35.89	33.18	7.91	29.88	46.43	16.35	26.42	13.64	8.50	6.18	0.05	0.00	0.00	
	Max	20.44	0.00	0.00	46.32	41.68	8.59	33.27	49.83	18.39	30.48	13.75	8.68	6.76	0.10	0.00	0.00	
8/28/2022	Average	20.25	0.00	0.00	39.19	37.31	8.27	31.22	48.17	16.96	28.10	13.71	8.54	6.63	0.08	0.00	0.00	Off
	Min	20.07	0.00	0.00	35.89	33.18	7.91	29.88	46.43	16.35	26.42	13.64	8.50	6.18	0.05	0.00	0.00	
	Max	20.44	0.00	0.00	46.32	41.68	8.59	33.27	49.83	18.39	30.48	13.75	8.68	6.76	0.10	0.00	0.00	
8/29/2022	Average	13.90	4.28	17.23	591.84	993.20	7.78	43.24	48.34	5.10	45.55	7.90	7.33	6.39	30.19	29.10	0.12	Off/Preheat/Normal/Shutdown
	Min	5.52	0.00	0.00	410.88	821.97	7.39	28.33	29.44	1.11	25.56	4.99	5.31	4.78	0.10	0.00	0.00	
	Max	20.37	726.03	126.97	914.98	1087.43	8.04	57.48	67.95	12.77	59.57	11.14	8.49	7.68	40.32	38.97	1.00	
8/30/2022	Average	16.19	4.48	18.78	703.74	992.03	7.53	55.76	45.05	-10.71	37.98	9.79	8.90	7.46	22.55	16.82	0.30	Off/Preheat/Normal/Shutdown
	Min	5.33	0.00	0.00	465.56	562.60	6.77	27.06	29.22	-39.31	24.33	3.88	4.85	5.30	0.10	0.00	0.00	
	Max	20.41	713.00	191.02	1026.75	1131.88	8.36	74.47	60.62	22.57	54.60	12.97	12.29	9.63	41.83	40.39	1.00	
8/31/2022	Average	17.19	11.59	20.05	723.56	988.84	7.54	47.48	54.60	7.12	38.60	9.67	8.40	7.86	19.74	0.00	0.15	Off/Preheat/Normal
	Min	8.54	0.00	0.00	554.42	737.83	6.93	37.00	44.81	-32.42	29.61	7.65	7.33	6.39	0.09	0.00	0.00	
	Max	20.41	791.21	158.45	1038.93	1151.22	8.10	77.23	73.53	36.23	45.73	12.04	10.98	9.52	41.75	0.09	1.00	



August 2022 Incineration Feed Log

TheDate	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DailySum	Monthly Sum
01-Aug-22	403.40	505.70	500.40	502.60	502.60	508.80	89.00	517.80	500.40	525.60	497.90	524.40	500.80	505.30	492.10	518.80	533.60	512.60	0.00	352.50	283.60	305.60	362.40	54.10	10000.00	182373
02-Aug-22	556.40	600.20	556.10	554.40	558.10	561.60	15.60	513.10	552.80	401.60	0.00	401.20	558.30	563.80	559.80	561.50	550.40	565.20	509.40	448.10	411.90	0.00	0.00	0.00	9999.50	
03-Aug-22	0.00	0.00	0.00	508.20	500.10	501.00	323.00	584.60	600.70	637.30	569.90	583.80	553.90	561.50	546.20	557.20	567.20	550.90	266.10	340.00	305.40	512.30	360.00	70.60	9999.90	
04-Aug-22	551.00	554.60	99.60	552.60	549.70	526.00	9.00	460.10	491.90	503.00	495.60	418.30	499.80	511.40	502.20	502.30	502.30	494.70	221.00	318.20	331.70	336.40	372.00	196.60	10000.00	
05-Aug-22	566.20	558.40	555.00	577.70	555.60	392.80	129.50	504.10	491.70	504.20	493.60	491.20	508.00	529.20	485.40	483.20	475.20	505.60	153.20	219.50	274.40	166.80	327.20	52.30	10000.00	
06-Aug-22	453.20	451.10	455.60	454.50	453.60	450.80	157.10	461.30	517.90	0.00	184.60	562.10	559.30	517.50	0.00	524.50	505.70	518.30	233.60	531.00	480.20	535.80	501.90	455.20	9964.80	
07-Aug-22	511.20	506.00	501.50	514.30	505.60	540.40	319.80	0.00	519.20	504.20	174.40	515.40	501.80	514.40	127.20	355.60	406.60	361.50	353.30	133.10	594.10	362.50	540.90	242.40	9605.40	
08-Aug-22	271.20	154.60	54.20	0.00	46.40	42.40	184.80	0.00	320.60	0.00	0.00	0.00	508.00	502.10	420.50	545.90	500.90	635.70	513.40	611.50	574.00	604.70	590.60	201.20	7282.70	
09-Aug-22	504.20	501.50	500.80	500.90	500.40	500.70	161.30	505.40	514.30	517.00	521.90	506.10	503.40	506.30	517.80	495.20	517.50	499.40	260.40	249.80	198.30	207.60	213.00	96.80	10000.00	
10-Aug-22	402.80	602.00	501.30	530.10	547.50	509.80	169.80	495.00	489.40	503.40	502.90	660.80	347.60	495.30	499.30	503.20	624.50	0.00	0.00	0.00	0.00	453.80	555.30	377.30	9771.10	
11-Aug-22	554.20	601.00	601.20	564.70	569.00	409.90	227.50	433.20	559.50	561.40	614.70	557.80	557.10	503.60	505.40	151.00	0.00	0.00	0.00	0.00	520.80	467.20	533.00	504.60	9996.80	
12-Aug-22	501.40	500.40	511.80	500.50	500.50	500.40	224.60	505.40	566.70	553.00	513.40	510.20	669.10	642.30	552.90	551.90	563.40	530.70	0.00	0.00	0.00	0.00	0.00	0.00	9398.60	
13-Aug-22	501.70	504.90	504.20	499.90	503.90	500.20	213.50	502.30	506.10	503.40	499.40	501.00	503.40	505.70	497.10	566.80	438.00	601.40	287.90	379.90	0.00	0.00	0.00	0.00	9520.70	
14-Aug-22	577.80	596.10	549.60	552.40	505.70	603.40	198.80	505.20	517.60	505.00	499.00	502.40	501.40	515.70	501.20	453.90	567.50	394.60	145.80	206.00	196.90	191.20	136.80	76.00	10000.00	
15-Aug-22	550.70	558.50	558.70	551.90	552.70	501.00	66.80	291.80	504.50	501.90	528.20	500.10	498.20	502.00	509.70	505.00	518.60	515.40	133.40	0.00	0.00	0.00	94.60	157.10	9100.80	
16-Aug-22	551.10	551.20	559.60	552.60	556.40	559.60	178.80	518.00	520.30	522.40	543.50	532.60	550.40	524.20	513.10	504.70	506.20	550.10	406.70	298.50	0.00	0.00	0.00	0.00	10000.00	
17-Aug-22	179.40	519.60	557.40	553.70	519.60	519.20	330.80	547.40	514.40	515.60	521.10	522.90	503.00	506.40	505.80	555.10	551.50	549.70	510.60	314.80	0.00	0.00	0.00	0.00	9798.00	
18-Aug-22	49.00	593.20	604.70	618.20	573.10	630.00	304.80	648.60	440.90	264.30	553.60	577.80	612.70	602.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7073.10	
19-Aug-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	0.10	0.00	0.00	0.10	
20-Aug-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-Aug-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	
22-Aug-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	
23-Aug-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	
24-Aug-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	
25-Aug-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	
26-Aug-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	
27-Aug-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	
28-Aug-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	
29-Aug-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	376.20	535.50	556.70	0.00	0.00	0.00	1468.40	
30-Aug-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	236.90	514.80	638.20	575.80	558.40	563.30	553.40	606.90	593.90	596.60	577.60	6015.80	
31-Aug-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	511.30	273.60	551.20	573.00	390.00	575.30	502.90	3377.30	

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
8/2/2022	21:00	23:00	2:00	Normal	9.1	10.5	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
8/8/2022	6:00	8:00	2:00	Normal	8.23	9.5	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
8/10/2022	17:01	21:00	3:59	Normal	8.9	10.3	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
8/13/2022	23:00	3:00	4:00	Shutdown	12.1	14.0	High CO average caused by a CO spike that occurred due to the cycling of the rams during the shut-down process	No waste was fed at this time. The incinerator was brought to a controlled shutdown.
8/15/2022	2:00	5:00	3:00	Normal	9.1	10.5	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
8/15/2022	19:00	22:00	3:00	Normal/Shutdown	9.9	11.4	High CO average caused by a CO spike that occurred due to the cycling of the rams during the shut-down process	No waste was fed at this time. The incinerator was brought to a controlled shutdown.
8/16/2022	14:00	16:00	2:00	Normal	11.2	12.9	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
8/18/2022	2:00	5:00	3:00	Normal	30.45	35.1	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.

Carbon Monoxide > 8ppm 4 hour alarm

8/30/2022	15:36	20:00	4:24	Normal	16.4	18.9	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
8/31/2022	17:56	0:00	6:04	Normal	51.61	59.6	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.

Secondary Chamber Temperature < 1000°C

Date	Start Time	Stop Time	Duration	Op. Mode	Temp. °C	Explanation	Actions Taken
8/6/2022	10:01	10:32	0:31	Normal	869	Low upper chamber temperature caused by an incorrect draft set point.	The draft setpoint was adjusted. No waste was fed until the upper chamber temperature returned to the normal operating range.
8/8/2022	11:05	12:05	1:00	Normal	787	Low upper chamber temperature caused by an incorrect draft set point.	The draft setpoint was adjusted. No waste was fed until the upper chamber temperature returned to the normal operating range.
8/15/2022	19:54	21:14	1:20	Shutdown	980	Low upper chamber temp caused by an incorrect draft setting during shutdown.	No waste was fed at this time. The incinerator was brought to a controlled shutdown.
8/29/2022	22:48	0:14	1:26	Shutdown	966	Low upper chamber temp caused by an incorrect draft setting during shutdown.	No waste was fed at this time. The incinerator was brought to a controlled shutdown.
8/30/2022	0:18	1:03	0:45	Shutdown	981	Low upper chamber temp caused by an incorrect draft setting during shutdown.	No waste was fed at this time. The incinerator was brought to a controlled shutdown.
8/31/2022	2:41	3:53	1:12	Shutdown	968	Low upper chamber temp caused by an incorrect draft setting during shutdown.	No waste was fed at this time. The incinerator was brought to a controlled shutdown.
8/2/2022	17:34	20:10	2:36	Shutdown	939	Low upper chamber temp caused by an incorrect draft setting during shutdown.	No waste was fed at this time. 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
8/29/2022	17:13	20:24	3:11	Normal	5.52	Low pH levels were caused by a pH pump malfunction.	Maintenance reset and reprimed the pH pumps.

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
8/30/2022	19:52:00	3:53:00	8:01:00	Normal		7.0	Maintenance detected a malfunction with atomizer B due to damaged gears.	Maintenance took the atomizer out of service.
8/31/2022	2:19:00	3:35:00	1:16:00	Shutdown	31.5		Atomizer amperage dropped during shutdown due to a reduced water pressure.	The incinerator was brought to a controlled shutdown.

Carbon Bed Inlet Temperature <57C

	Start	Stop		Op.	Carbon bed		Actions
Date	Time	Time	Duration	Mode	inlet °C	Explanation	Taken
8/29/2022	17:20	1:02	7:42	Normal	63.9	High carbon bed inlet temper was caused by an incorrect reheat steam setpoint.	Maintenance adjusted the reheat steam setpoint.

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
8/29/2022	21:15	1:02	3:47	Shutdown	8.12	Low differential temperature was the result of a high carbon inlet temperature.	Maintenance adjusted the reheat steam going to the carbon inlet.
8/30/2022	16:54	3:53	10:59	Normal	6.94	Low differential temperature was caused by a plugged heat exchanger by the demister pads.	Maintenance cleaned the heat exchanger.



September 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
9/1/2022	Average	13.9	8.2	52.3	967.3	1047.8	6.6	35.2	54.3	19.1	43.3	8.0	7.5	6.5	38.8	0.0	0.0	Normal(ON)/Shutd own/Preheat/Shut down/Normal(ON)
	Min	11.4	0.0	7.9	865.6	691.7	6.2	32.0	53.2	16.4	39.4	7.5	7.1	6.3	38.5	0.0	0.0	
	Max	18.6	750.5	178.2	1026.9	1125.5	6.9	38.1	57.2	22.5	46.8	8.4	7.9	6.9	39.1	0.0	0.0	
9/2/2022	Average	15.3	1.3	43.2	962.2	1023.9	6.9	32.4	55.4	23.0	43.3	7.8	7.4	6.4	38.7	0.0	0.0	Normal(ON)/Shutd own/Off/Preheat/S hutdown
	Min	10.0	0.0	0.0	876.0	603.5	6.5	25.6	53.3	19.7	41.1	7.4	7.2	6.3	24.6	0.0	0.0	
	Max	20.4	89.8	129.9	989.0	1110.3	7.3	36.0	61.3	35.7	45.8	8.1	7.6	6.9	42.0	0.0	1.0	
9/3/2022	Average	15.3	12.9	26.0	708.7	991.3	7.5	44.0	51.1	7.1	40.7	8.2	7.5	6.9	29.7	0.0	0.0	Off/Preheat/Norma l(ON)/Shutdown/Of f/Preheat
	Min	8.0	0.0	0.0	609.1	476.1	6.9	30.4	30.3	-36.4	20.9	7.6	7.3	6.5	0.1	0.0	0.0	
	Max	20.4	770.3	161.5	875.8	1110.9	7.8	72.1	57.4	24.3	48.2	9.2	8.1	7.3	40.2	0.0	0.0	
9/4/2022	Average	14.4	1.6	30.8	735.5	1053.8	7.0	35.4	54.6	19.2	42.4	7.8	7.6	6.9	38.6	0.0	0.0	Preheat/Normal(O N)/Shutdown
	Min	10.8	0.0	14.2	590.9	1000.8	6.8	32.4	52.6	15.7	40.3	7.6	7.2	6.4	24.2	0.0	0.0	
	Max	16.2	775.3	125.5	898.4	1096.0	7.5	37.9	56.6	22.0	46.8	8.1	8.0	7.0	39.5	0.0	1.0	
9/5/2022	Average	16.8	5.1	24.1	643.8	777.9	6.8	40.1	59.0	18.8	40.6	8.5	7.5	7.0	20.6	0.0	0.0	Off/Preheat/Norma l(ON)
	Min	8.8	0.0	0.0	442.9	293.2	6.4	28.1	48.4	2.1	31.0	7.3	7.0	6.5	0.0	0.0	0.0	
	Max	20.4	2379.3	132.8	898.4	1110.4	7.5	53.5	76.6	40.8	46.8	10.0	8.0	7.3	39.5	0.0	1.0	
9/6/2022	Average	13.6	3.1	62.3	907.2	1070.3	6.8	35.4	54.9	19.5	42.5	7.5	7.3	6.7	38.8	0.0	0.0	Normal(ON)
	Min	12.0	0.0	12.4	837.8	1035.1	6.5	31.6	52.1	13.5	39.8	7.4	7.2	6.5	38.5	0.0	0.0	
	Max	14.7	1116.0	226.3	976.5	1106.1	7.1	39.1	57.1	23.1	45.6	7.7	7.4	7.1	39.0	0.0	0.0	
9/7/2022	Average	13.8	2.1	51.7	926.0	1059.3	6.9	35.5	55.3	19.8	43.1	7.4	7.3	7.0	38.6	0.0	0.0	Normal(ON)
	Min	11.0	0.0	0.0	870.8	1028.9	6.8	34.3	51.5	13.7	41.8	7.3	7.2	6.8	38.4	0.0	0.0	
	Max	16.0	963.6	174.4	966.9	1089.5	7.1	38.4	57.3	21.9	44.8	7.5	7.9	7.2	38.8	0.0	0.0	
9/8/2022	Average	13.7	0.3	71.5	910.8	1062.1	6.9	35.2	55.6	20.4	43.7	7.3	7.3	6.9	40.2	0.0	0.0	Normal(ON)
	Min	12.1	0.0	22.3	880.3	1032.6	6.6	33.2	54.7	17.7	42.2	7.3	7.2	6.8	38.5	0.0	0.0	
	Max	15.4	63.1	208.6	968.1	1098.4	7.1	38.1	56.6	21.9	45.4	7.4	7.3	7.0	41.4	0.1	0.0	
9/9/2022	Average	13.8	0.6	70.1	920.5	1067.6	7.1	36.4	56.6	20.1	44.7	7.3	7.2	6.9	41.2	0.0	0.1	Normal(ON)
	Min	11.9	0.0	18.5	880.5	1002.2	6.7	33.5	54.8	15.9	42.3	7.2	7.2	6.8	41.0	0.0	0.0	
	Max	15.2	352.2	200.2	969.4	1110.6	7.4	41.5	58.3	21.7	47.4	7.3	7.3	7.0	41.3	0.0	1.0	
9/10/2022	Average	13.7	1.1	64.2	923.4	1064.9	7.3	38.1	57.5	19.4	44.9	7.2	7.2	7.0	41.1	0.0	0.2	Normal(ON)
	Min	10.7	0.0	12.1	889.1	984.1	6.9	35.6	55.4	15.9	42.7	7.2	7.2	6.9	41.0	0.0	0.0	
	Max	15.3	519.9	213.7	948.4	1110.8	7.5	41.5	58.8	21.9	47.4	7.3	7.3	7.0	41.3	0.1	1.0	
9/11/2022	Average	13.6	0.5	76.9	921.6	1067.1	7.3	38.7	58.2	19.4	45.2	7.2	7.3	6.9	40.9	0.0	0.7	Normal(ON)
	Min	11.5	0.0	16.8	892.0	1002.3	7.1	36.7	56.9	17.1	43.9	7.2	7.2	6.8	40.8	0.0	0.0	
	Max	15.3	224.1	291.0	960.4	1186.1	7.4	41.1	59.0	21.7	46.6	7.2	7.4	7.0	41.0	0.0	1.0	
9/12/2022	Average	13.6	1.9	53.4	920.1	1057.6	7.4	38.5	58.3	19.8	43.4	7.2	7.3	6.8	40.9	0.0	0.6	Normal(ON)
	Min	10.1	0.0	12.3	869.0	977.3	6.8	34.3	55.3	17.8	41.7	7.2	7.2	6.4	40.8	0.0	0.0	
	Max	16.0	870.2	200.0	937.4	1123.8	7.6	41.4	59.4	22.2	45.2	7.3	7.6	7.1	41.1	0.0	1.0	
9/13/2022	Average	14.0	4.3	48.6	835.7	993.5	6.6	33.3	55.8	22.5	41.3	7.3	7.4	7.0	41.1	0.0	0.6	Normal(ON)/Shutd own/Off/Preheat/ Normal(ON)
	Min	10.0	0.0	0.0	687.3	405.7	6.1	23.9	53.5	16.1	38.4	7.2	7.1	6.9	40.9	0.0	0.0	
	Max	20.4	3085.5	146.5	932.5	1121.8	6.9	40.0	59.4	35.5	45.3	7.9	8.0	7.3	41.3	0.0	1.0	
9/14/2022	Average	13.5	1.6	69.5	906.9	1065.1	6.7	35.0	55.9	20.9	42.2	7.2	7.3	6.7	38.0	0.0	0.7	Normal(ON)/Shutd own
	Min	11.2	0.0	15.5	849.7	1028.5	6.0	28.4	52.8	16.2	39.8	7.2	7.2	6.5	0.4	0.0	0.0	
	Max	14.9	775.3	168.0	987.1	1124.7	7.1	40.0	57.8	25.0	44.3	7.3	7.4	7.0	41.1	0.0	1.0	
9/15/2022	Average	15.3	2.3	47.6	817.6	1036.8	6.0	33.6	54.5	20.9	37.6	7.4	7.3	6.9	26.6	0.0	0.6	Shutdown/Off/Preh eat/Normal(ON)
	Min	10.9	0.0	0.0	592.5	885.9	5.0	21.9	50.2	-7.8	23.3	7.2	7.0	6.5	0.1	0.0	0.0	
	Max	20.4	1038.7	171.4	992.7	1109.2	6.4	59.0	68.8	46.8	42.2	8.2	7.5	7.2	40.7	0.2	1.0	
9/16/2022	Average	13.7	1.2	69.2	904.8	1070.8	6.7	34.5	54.0	19.5	42.5	7.2	7.2	6.7	40.2	0.0	0.6	Normal(ON)/Shutd own//Normal(ON)
	Min	11.9	0.0	15.1	861.2	1026.6	6.2	31.3	48.3	10.5	41.3	7.2	7.1	6.1	38.6	0.0	0.0	
	Max	15.5	51.1	209.6	990.6	1163.8	7.2	38.0	55.6	23.1	44.2	7.2	7.4	7.0	42.1	0.0	1.0	
9/17/2022	Average	13.6	5.2	62.5	948.0	1062.1	7.0	35.2	54.5	19.3	42.7	7.2	7.3	6.9	41.4	0.0	0.2	Normal(ON)
	Min	10.8	0.0	14.1	903.9	998.9	6.6	29.0	38.1	3.1	36.8	7.2	7.1	6.7	40.9	0.0	0.0	
	Max	15.1	926.5	213.5	979.3	1112.7	7.4	38.6	59.2	24.5	46.0	7.3	7.5	7.2	41.7	0.0	1.0	



September 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
9/18/2022	Average	13.5	1.9	55.3	910.1	1062.4	7.4	36.7	59.1	22.4	45.9	7.2	7.2	6.8	41.5	0.0	0.0	Normal(ON)
	Min	11.5	0.0	10.6	867.8	1029.6	7.1	34.0	58.0	20.2	44.6	7.2	7.1	6.7	41.3	0.0	0.0	
	Max	14.8	787.6	169.5	947.6	1120.8	7.6	38.8	60.6	24.1	47.3	7.3	7.5	6.9	41.7	0.0	0.0	
9/19/2022	Average	17.6	0.3	12.0	768.0	827.7	7.2	34.0	48.1	14.1	40.1	7.7	7.5	7.0	31.6	10.8	0.4	Normal(ON)/Shutd own/Off/Preheat/S hutdown
	Min	11.7	0.0	0.0	555.1	316.8	6.5	25.9	29.3	-11.1	30.2	7.2	7.2	6.6	0.1	0.0	0.0	
	Max	20.4	84.5	65.7	939.0	1127.2	7.5	57.3	58.7	25.3	46.5	8.6	8.0	7.7	42.2	41.9	1.0	
9/20/2022	Average	20.2	50.0	1.0	257.6	115.5	7.1	62.0	47.9	-14.2	29.8	8.5	8.1	7.5	1.5	1.5	0.0	Off/Preheat
	Min	20.0	0.0	0.0	110.1	44.8	6.4	35.0	31.1	-43.3	20.6	8.0	7.6	7.0	0.1	0.0	0.0	
	Max	20.4	8216.0	78.6	554.5	315.8	7.6	84.4	76.5	37.1	44.3	8.8	8.8	7.9	16.7	17.0	1.0	
9/21/2022	Average	20.3	0.0	0.0	68.6	39.2	7.4	51.8	63.6	11.9	36.0	8.6	8.4	7.2	1.4	0.2	0.0	Preheat
	Min	20.1	0.0	0.0	50.4	35.0	7.0	30.4	43.7	-33.7	21.2	8.6	7.9	6.5	0.0	0.0	0.0	
	Max	20.4	0.0	0.0	110.0	45.8	8.0	84.4	77.3	43.0	48.6	8.6	8.8	7.7	10.9	1.7	0.0	
9/22/2022	Average	15.8	2.6	19.8	322.9	648.9	6.9	46.5	55.6	9.2	39.8	8.0	7.5	7.1	19.7	0.0	0.2	Preheat/Normal(O N)
	Min	0.0	0.0	0.0	-17.8	-17.8	0.0	-17.8	-17.8	-20.4	-17.8	0.0	0.0	0.0	0.0	0.0	0.0	
	Max	20.4	622.9	99.9	837.4	1060.1	8.0	69.1	77.1	40.2	50.5	8.9	8.0	7.5	39.3	0.1	1.0	
9/23/2022	Average	12.9	9.2	49.3	876.1	1051.4	5.6	37.3	54.9	17.6	44.7	7.2	7.3	7.3	40.1	0.0	0.0	Normal(ON)/Shutd own/Off/Preheat/ Normal(ON)
	Min	8.8	0.0	0.0	734.4	748.4	5.3	31.1	54.4	13.5	40.9	7.1	7.0	7.1	38.5	0.0	0.0	
	Max	20.3	2048.8	179.5	970.9	1144.0	6.0	42.0	55.9	23.4	47.5	7.5	7.9	7.5	41.4	0.2	1.0	
9/24/2022	Average	12.6	2.6	56.8	932.9	1058.1	5.9	36.9	55.9	19.1	43.1	7.2	7.2	7.1	41.3	0.0	0.0	Normal(ON)
	Min	10.7	0.0	14.5	809.0	1016.7	5.4	31.0	54.4	14.4	39.4	7.1	7.1	7.0	41.2	0.0	0.0	
	Max	14.2	534.7	188.5	976.0	1091.9	6.3	43.2	58.0	23.5	47.2	7.2	7.2	7.2	41.5	0.0	0.0	
9/25/2022	Average	12.6	3.5	59.7	927.0	1059.3	6.5	41.1	59.1	18.0	45.9	7.2	7.2	7.1	41.0	0.0	0.1	Normal(ON)/Shutd own/Off/Preheat/ Normal(ON)
	Min	10.5	0.0	0.0	788.9	820.4	6.2	37.3	56.8	13.7	43.2	7.1	7.0	7.0	40.6	0.0	0.0	
	Max	20.3	694.3	213.1	977.0	1136.1	6.8	46.1	60.2	21.3	50.3	7.3	7.6	7.4	41.2	0.0	1.0	
9/26/2022	Average	12.5	1.1	69.5	913.5	1087.1	6.3	40.1	57.7	17.6	46.7	7.2	7.3	6.9	41.1	0.0	0.0	Normal(ON)
	Min	9.6	0.0	-0.1	867.2	1023.3	6.2	34.4	55.1	14.3	42.8	7.1	7.2	6.7	40.9	0.0	0.0	
	Max	15.0	521.8	217.9	975.2	1171.0	6.6	45.5	59.7	21.6	50.7	7.3	7.4	7.2	41.2	0.0	0.0	
9/27/2022	Average	13.1	4.0	45.4	899.8	1060.3	6.3	39.0	55.3	16.3	45.6	7.2	7.3	6.8	41.2	0.0	0.0	Normal(ON)/Shutd own/Off/Preheat/ Normal(ON)
	Min	10.7	0.0	0.0	780.2	662.9	6.1	30.5	54.5	11.1	42.0	7.1	7.2	6.7	41.1	0.0	0.0	
	Max	20.4	948.1	140.9	962.7	1136.9	6.5	44.6	56.6	24.8	49.0	7.4	7.8	7.2	41.3	0.0	1.0	
9/28/2022	Average	13.3	2.3	37.5	904.0	1054.6	6.0	35.8	54.6	18.9	42.4	7.2	7.3	6.9	40.7	0.0	0.0	Normal(ON)/Shutd own/Off/Preheat/ Normal(ON)
	Min	11.3	0.0	0.0	784.8	715.0	5.8	32.9	54.4	16.6	40.8	7.1	7.1	6.7	39.1	0.0	0.0	
	Max	20.3	800.1	142.4	960.1	1102.2	6.3	38.1	56.7	22.1	45.2	7.4	7.5	7.2	41.3	0.0	0.0	
9/29/2022	Average	13.2	2.4	48.5	868.7	1059.9	5.8	34.2	54.5	20.3	40.9	7.2	7.3	6.9	40.6	0.0	0.0	Normal(ON)/Shutd own/Normal(ON)
	Min	10.7	0.0	11.7	815.2	1022.0	5.5	31.0	54.4	18.2	39.6	7.1	7.2	6.7	40.4	0.0	0.0	
	Max	15.8	673.3	182.0	917.9	1101.8	5.9	36.5	54.8	23.5	42.0	7.4	7.4	7.2	40.9	0.3	0.0	
9/30/2022	Average	13.6	2.4	54.6	875.9	1047.5	5.7	34.4	54.6	20.3	40.8	7.2	7.3	7.0	40.4	0.0	0.1	Normal(ON)/Shutd own/Off/Preheat/ Normal(ON)
	Min	10.1	0.0	0.0	736.7	813.9	5.3	30.8	54.4	14.7	38.7	7.2	7.2	6.8	40.1	0.0	0.0	
	Max	20.4	790.2	178.7	940.1	1083.9	6.1	40.2	55.8	23.7	43.6	7.4	7.4	7.1	40.6	0.0	1.0	

September 2022 Incineration Feed Log

TheDate	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DailySum	Monthly Sum				
01-Sep-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	460.10	502.80	551.90	552.10	553.90	549.90	516.50	553.40	546.90	268.60	616.70	507.00	550.30	575.40	307.60		7613.1	230908.3			
02-Sep-22	508.40	551.30	549.80	553.50	552.30	554.10	161.80	149.40	555.80	557.90	558.00	548.60	554.90	561.80	556.80	559.20	96.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			8129.8		
03-Sep-22	0.00	0.00	0.00	0.00	0.00	400.90	412.20	208.00	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			1021.1		
04-Sep-22	0.00	433.70	0.00	0.00	0.00	0.00	221.70	525.80	505.40	507.70	536.80	564.60	517.60	404.20	426.70	418.40	509.70	443.40	361.20	505.10	335.10	0.00	0.00	0.00	0.00			7217.1		
05-Sep-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	416.80	419.20	351.80	551.20	549.50	549.90	607.50	240.20		3686.1				
06-Sep-22	533.60	549.80	554.10	546.60	550.00	550.00	203.80	359.20	500.60	506.60	507.80	511.10	505.40	500.60	500.50	508.90	501.20	497.70	417.90	462.90	14.40	120.50	0.00	0.00	0.00			9903.2		
07-Sep-22	0.00	0.00	507.30	112.20	219.50	551.00	226.60	579.20	554.80	550.80	552.40	557.40	570.70	562.20	562.00	550.20	566.90	557.00	121.10	600.70	517.20	269.40	654.00	57.40	0.00			10000.0		
08-Sep-22	562.20	554.00	560.40	553.60	563.40	251.00	175.70	551.20	550.20	568.40	334.30	572.90	558.00	567.20	556.70	563.30	414.40	557.60	242.50	89.70	191.00	89.30	185.30	155.20	0.00			9967.5		
09-Sep-22	551.60	550.00	549.40	549.50	551.10	549.40	268.40	318.50	550.50	557.70	551.10	550.40	555.90	550.10	551.20	524.80	568.80	407.90	233.70	148.80	130.40	180.00	42.00	0.00	0.00			9991.2		
10-Sep-22	506.00	495.70	501.90	499.00	501.70	498.80	145.90	498.60	498.10	513.40	509.60	489.90	549.80	550.30	551.20	551.40	557.10	560.30	224.20	224.20	204.10	238.40	130.40	0.00	0.00			10000.0		
11-Sep-22	564.40	551.20	618.90	646.40	561.80	553.70	150.30	502.90	556.30	521.40	309.90	554.70	466.90	504.60	500.50	503.50	499.30	502.00	285.10	144.60	169.20	208.80	123.60	0.00	0.00			10000.0		
12-Sep-22	614.80	552.40	581.90	652.40	602.50	557.30	244.00	499.70	295.50	321.80	515.90	546.30	552.30	554.60	313.50	551.10	554.60	562.80	320.50	604.30	0.00	0.00	0.00	0.00	0.00	0.00			9998.2	
13-Sep-22	516.00	550.70	553.50	553.40	620.30	551.00	164.00	553.40	555.60	166.50	0.00	0.00	0.00	0.00	0.00	0.00	516.80	602.00	603.70	548.20	547.00	550.20	547.10	179.80	0.00			8879.2		
14-Sep-22	548.10	545.00	510.20	550.00	549.10	552.00	156.90	558.80	511.80	563.60	550.00	544.20	557.20	551.30	557.20	560.20	495.80	400.50	320.80	417.30	0.00	0.00	0.00	0.00	0.00	0.00			10000.0	
15-Sep-22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.90	602.50	600.00	599.70	604.00	610.10	591.80	591.10	610.70	607.60	597.80	308.40	555.30	552.60	552.30	558.50	258.40	0.00	0.00			8879.7	
16-Sep-22	594.50	604.40	555.30	602.60	579.60	614.60	348.00	326.40	554.60	547.20	555.30	555.30	549.50	510.60	507.90	553.10	557.10	540.60	0.00	0.00	0.00	0.00	170.60	172.70	0.00	0.00			9999.9	
17-Sep-22	618.20	620.90	618.10	594.00	244.80	0.00	0.00	147.10	268.40	333.00	417.10	563.20	597.00	553.50	606.30	603.60	607.00	601.40	278.20	368.60	411.80	333.20	606.20	0.00	0.00	0.00			9991.6	
18-Sep-22	551.00	549.80	550.00	549.80	551.20	546.80	232.60	279.00	572.20	566.90	563.00	555.90	583.80	562.20	555.50	508.80	559.90	435.10	139.00	583.40	0.00	0.00	0.00	0.00	0.00	0.00			9995.9	
19-Sep-22	600.60	600.40	614.00	316.00	308.50	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			2439.5	
20-Sep-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	0.00			0.0	
21-Sep-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	38.40	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		38.4
22-Sep-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	145.80	346.60	376.60	381.90	313.60	258.90	0.00	0.00			1823.4	
23-Sep-22	306.60	298.20	490.00	553.50	551.20	512.10	118.80	580.60	513.30	602.00	581.10	598.30	604.40	602.80	0.00	0.00	0.00	0.00	0.00	197.60	125.40	269.40	314.40	196.60	0.00	0.00			8016.3	
24-Sep-22	269.80	494.40	496.90	477.10	452.00	502.40	133.00	499.90	497.80	499.20	499.60	500.70	507.30	500.80	500.20	506.20	140.40	502.70	420.50	0.00	485.20	340.70	202.00	20.50	0.00	0.00			9449.3	
25-Sep-22	564.60	552.20	569.80	595.20	617.20	602.60	104.00	446.30	501.40	499.50	499.40	499.60	498.40	475.10	336.10	0.00	0.00	0.00	0.00	551.20	559.60	552.80	552.60	422.40	0.00	0.00			10000.0	
26-Sep-22	604.00	568.30	627.10	554.80	553.00	246.20	261.80	494.00	575.90	603.00	609.90	600.00	599.90	605.60	601.90	609.60	600.90	446.90	112.90	124.30	0.00	0.00	0.00	0.00	0.00	0.00			10000.0	
27-Sep-22	601.90	600.40	609.40	558.90	601.10	332.20	118.40	545.40	609.30	513.50	612.80	612.00	118.10	0.00	0.00	0.00	0.00	229.80	431.30	484.40	483.70	497.80	457.20	227.20	0.00	0.00			9244.8	
28-Sep-22	504.45	651.45	401.20	399.30	419.60	399.00	512.40	502.40	503.90	505.00	608.70	506.60	0.00	0.00	0.00	0.00	0.00	179.00	527.00	516.60	577.10	624.10	421.80	436.40	0.00	0.00			9196.0	
29-Sep-22	498.80	502.30	525.60	408.50	114.80	0.00	0.00	0.00	0.00	317.20	502.40	174.00	529.20	143.40	500.50	502.90	504.90	515.60	467.50	500.20	502.10	511.90	502.30	311.50	0.00	0.00			8535.6	
30-Sep-22	517.80	510.20	512.90	501.00	405.30	452.60	232.00	490.20	509.60	500.30	536.10	0.00	0.00	0.00	0.00	0.00	500.80	318.20	0.00	0.00	0.00	136.80	512.50	255.10	0.00	0.00			6891.4	

Comment

Fire door & Upper burner blower

Atomizer oil pressure / PM

Boiler pump & Atomizer install

Lower ram/waste build up

lower ram/waste/build up

lower ram/buildup

Fire Door cyl's replaced



September 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
9/1/2022 23:59	0	90.4	0	0	779	0	0	8.08	0	1	0.3333333	2	0.2	-0.1	0	0.1	
9/2/2022 0:03	91	90.4	0.05999985	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
9/26/2022 20:23	0	90.4	0	0	779	0	0	8.08	0	0	0	0	0	0.1	0	0.1	
9/26/2022 20:27	92	90.4	0.1599998	0	779	0	0	8.08	0	0	0	0	0	0	0	0	
9/26/2022 20:30	0	90.4	0	0	779	0	13.9	8.08	5.82	0	0	0	0	0	0	0	
9/26/2022 20:45	0	90.4	0	779	779	0	0	8.08	0	0	0	0	0	0	0	0	
9/26/2022 20:47	0	90.4	0	0	779	0	8.1	8.08	0.02000046	0	0	0	0	0	0	0	

Carbon Monoxide > 8ppm 12 hour alarm



Carbon Monoxide > 8ppm 12 hour alarm

	Start	Stop		Op.	Stack CO	Stack CO		Actions
Date	Time	Time	Duration	Mode	@ 11% O2	as mg/m ³	Explanation	Taken
9/23/2022	15:00	18:00	3:00	Normal	9.4	10.8	During the shut-down process the maintenance tech extended the internal ram to near full extension which caused a CO spike at 15:00 that peaked at 1095.08ppm. This CO spike caused the 12 hour CO average to go above the prescribed limit	The incinerator was brought to a controlled shutdown. No waste was fed during this

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
9/6/2022	6:00	9:00	3:00	Normal	10.7	12.3	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
9/7/2022	19:00	22:00	3:00	Normal	9.6	11.1	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
9/14/2022	19:31	0:00	4:29	Normal	8.7	10.0	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
9/15/2022	18:01	22:00	3:59	Normal	9.7	11.2	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
9/17/2022	6:30	11:00	4:30	Normal	9.4	10.8	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
9/17/2022	19:31	0:00	4:29	Normal	13.5	15.6	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
9/23/2022	3:00	5:00	2:00	Normal	8.5	9.8	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.

Carbon Monoxide > 8ppm 4 hour alarm

9/23/2022	14:00	19:00	5:00	Normal	14.8	17.1	During the shut-down process the maintenance tech extended the internal ram to near full extension which caused a CO spike at 15:00 that peaked at 1095.08ppm. This CO spike caused the 12 hour CO average to go above the prescribed limit	The incinerator was brought to a controlled shutdown. No waste was fed during this
9/24/2022	7:00	10:00	3:00	Normal	8.4	9.7	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
9/17/2022	13:00	17:00	4:00	Normal	11.4	13.2	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.
9/29/2022	12:00	14:00	2:00	Normal	8.5	9.8	High CO average caused by CO spike that occurred after waste the charged into the incinerator.	The operator reduced his feed rate until the CO levels returned to the normal operating range.

Secondary Chamber Temperature < 1000°C

Date	Start Time	Stop Time	Duration	Op. Mode	Temp. °C	Explanation	Actions Taken
9/1/2022	3:19	4:29	1:10	Shutdown	811	Low upper chamber temp caused by an incorrect draft setting during shutdown.	No waste was fed at this time. The incinerator was brought to a controlled shutdown.

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
9/14/2022	21:25:00	0:18:00	2:53:00	Shutdown	15.3		Atomizer amperage dropped during shutdown due to a reduced water pressure.	The incinerator was brought to a controlled shutdown.
9/23/2022	23:03:00	25:46:00	2:43:00	Shutdown	14.8		Atomizer amperage dropped during shutdown due to a reduced water pressure.	The incinerator was brought to a controlled shutdown.