



2021 Q4

INCINERATION

REPORT



Stericycle, ULC
95 Deerhurst Drive
Brampton, ON
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January 25th, 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 fourth quarter of 2021.

During October 2021 there were 7 occurrences of the 4-hour CO alarm & 0 occurrences of the 12-hour CO alarm. In November 2021 there were 7 occurrences of the 4-hour CO alarm and 0 occurrences of the 12-hour CO alarm. In December 2021 there were 9 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 Q4 of 2021.

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

FOURTH QUARTER 2021

INCINERATOR QUARTERLY REPORT - SUPPLEMENTAL INFORMATION

- The Emergency Bypass stack was used four (4) times during Q4 2021. A detailed description is provided in this report.
- Throughout the quarter, minor issues with either the waste feed or the proper operation of certain pieces of equipment caused alarm conditions. In all cases, the problems were fixed, and normal operations resumed. Corrective actions included adjustments to the waste feed mix and rate and corrective maintenance on affected systems.
- Throughout the fourth quarter of 2021, the incinerator was run by trained Stericycle operators Emilio Perez, Ryan Turner, Said M. Said & Julius Claude.
- There were no complaints received regarding the operation of the incinerator during the fourth quarter of 2021.
- Stericycle Inc. operated the incinerator on the following days during the third quarter:

Start-up	Shut Down
09/27/2021 @ 10:28	10/17/2021 @ 00:01
10/20/2021 @ 17:52	10/24/2021 @ 13:42
10/24/2021 @ 21:53	11/10/2021 @ 00:25
11/10/2021 @ 04:27	11/11/2021 @ 12:18
11/11/2021 @ 16:20	11/17/2021 @ 12:06
11/17/2021 @ 16:17	12/19/2021 @ 00:35
12/26/2021 @ 21:41	12/31/2021 @ 09:10
12/31/2021 @ 10:09	

During Q4 of 2021 routine maintenance was performed on the incinerator during the scheduled shutdowns.

- Replacement of refractory in the transfer stack.
- Replaced nose pieces on the lower ram
- Installed new VFD units to control the I.D. fan and cooling tower.

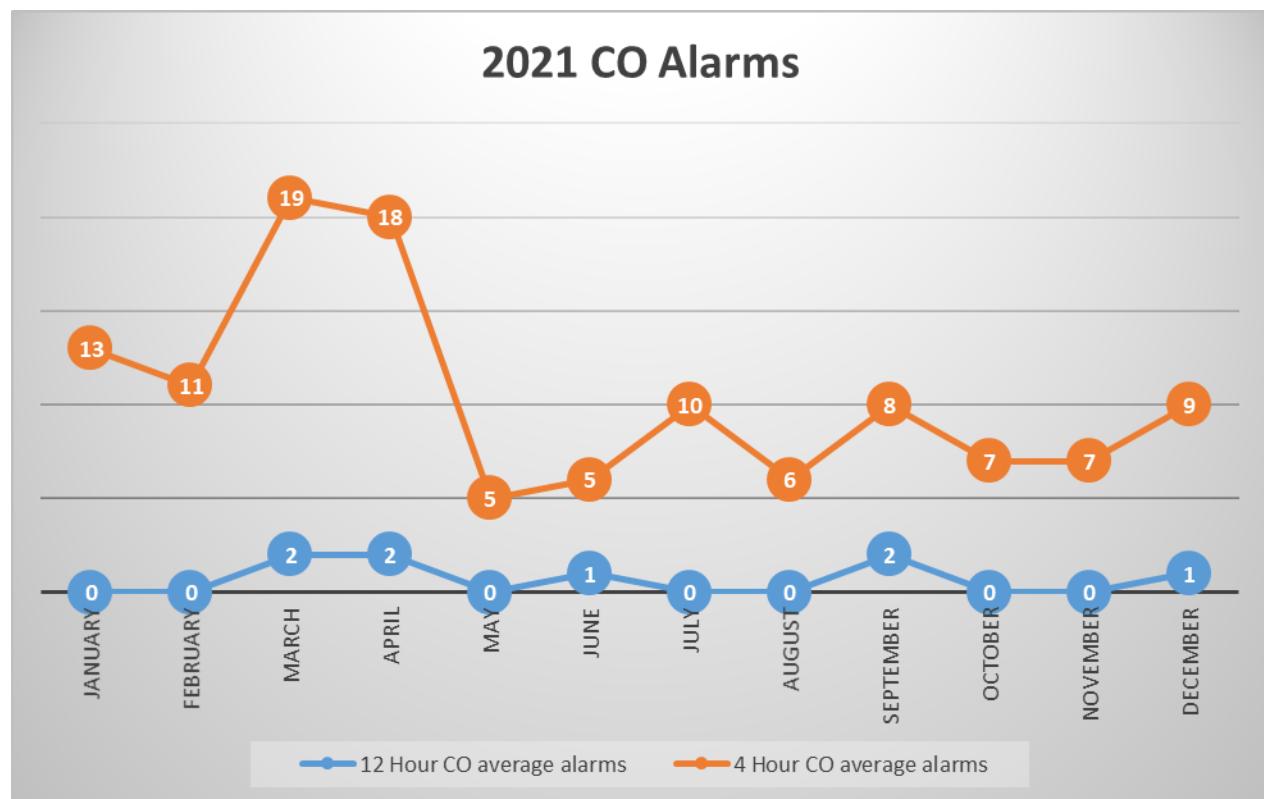
Emergency Bypass Summary

Date	Start Time	End Time	Duration	Emission Volume (m³)	Reason	Corrective Action
10/9/2021	9:36	10:00	0:24	87.50	Local momentary power outage (flicker) caused the facility air compressor to go offline and the resulting loss of air pressure caused the emergency bypass stack to open.	Stericycle maintenance reset the air compressor. Once air pressure was restored, the emergency bypass stack cap was closed and normal operations resumed.
12/13/2021	22:50	23:03	0:13	47.40	TM was attempting to troubleshoot/repair a mechanical issue with the atomizer tank float switch when the wires came off and grounded out on the atomizer tank. This caused the Battery Back Up unit to fault which shut down the scrubber PLC putting the incinerator into an immediate bypass for 13 minutes.	Stericycle maintenance restarted the APC system and the emergency bypass stack was closed.
12/16/2021	12:30	12:36	0:06	21.87	During normal operation of the incinerator, the scrubber suddenly shut itself down causing an emissions bypass.	Bypass had a duration of 6 minutes. Upon bypass, all critical systems were immediately inspected. There were no faults or motors tripped out including – I.D. fan, Quench pump (was still running), 2 x quench/condenser pumps, atomizer pump, 2 x cooling tower pumps. There was no smoke in the building indicating

						draft had gone positive. All monitored parameters on the DAS were in normal operating range. After scrubber was restarted, it was immediately put into shutdown/burn down while the system was monitored and inspected. Nothing was found during this time and no further issues presented themselves. The quench thermocouple connections were checked for security with no issues found.
12/31/2021	9:08	9:32	0:24	87.50	Momentary power brown-out (lights flickered in the office) caused the cooling tower & I.D. fan VFD's to go offline.	Due to the cooling tower and I.D. fan VFD's shut-down the incinerator when positive. When the operating mode was switched to shutdown, the emergency bypass stack opened. The VFD's were restarted and the emergency bypass stack cap was closed.

CO Alarm Chart Q4 2021

Month	4 Hour CO average alarms	12 Hour CO average alarms
January	13	0
February	11	0
March	19	2
April	18	2
May	5	0
June	5	1
July	10	0
August	6	0
September	8	2
October	7	0
November	7	0
December	9	1

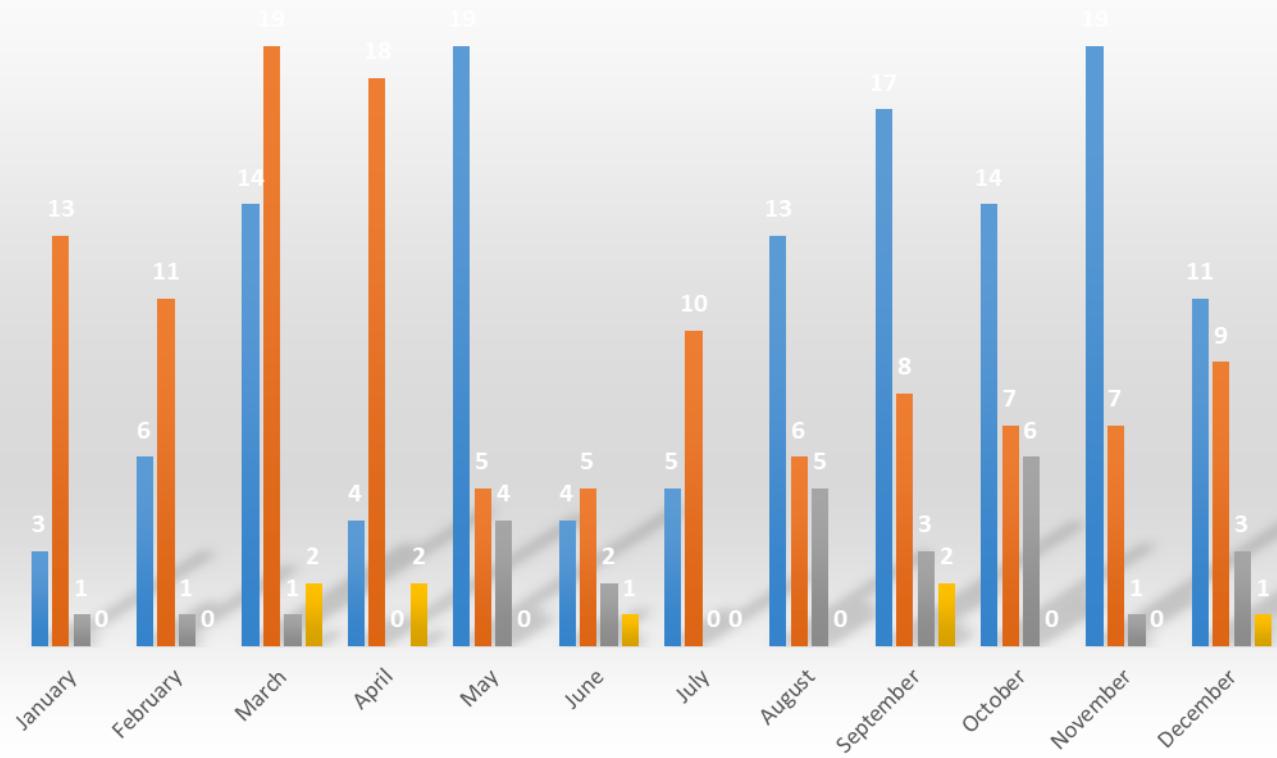


2020 CO alarms vs. 2021 CO alarms

Month	2020		2021	
	4 Hr. Alarm	12 Hr. Alarm	4 Hr. Alarm	12 Hr. Alarm
January	3	1	13	0
February	6	1	11	0
March	14	1	19	2
April	4	0	18	2
May	19	4	5	0
June	4	2	5	1
July	5	0	10	0
August	13	5	6	0
September	17	3	8	2
October	14	6	7	0
November	19	1	7	0
December	11	3	9	1

CO alarms 2020 vs. 2021

■ 2020 4 Hr CO alarms ■ 2021 4 Hr CO alarms ■ 2020 12 hr CO alarms ■ 2021 12 hr CO alarms



As shown by the above chart, in 2021 Stericycle ULC had 9% decrease in 4 hour CO alarms and a 70% decrease in 12 hour CO alarms. Stericycle will continue to work at minimizing CO alarms and improving the incineration process.

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 Q4 of 2021.

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

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

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

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

Regards,



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



October 13, 2021

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

Dear Christelle Broux,

RE: Stericycle Site Certificate of Approval No. A680324
Use of the Emergency Bypass Stack
Ref #: 6231-C7MJVM

On October 9th, 2021 at approximately 09:36 the emergency bypass stack was opened due loss of air pressure in the system.

As required by conditions 36 and 38(1) (b) & (2) of the above referenced ECA, the incinerator was brought into a controlled shutdown during this time. The emergency bypass stack was open for a total duration of twenty-four (24) 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 October 9th, 2021 at approximately 10:20 a call was placed to the Spills Action Control center by Stericycle Operations Supervisor Conan Fonseca to report the use of the emergency bypass stack. At approximately 09:30 a momentary power outage (“flicker”) caused the facilities main air compressor to shut down. As a result, the system lost air pressure and the emergency bypass cap opened. Stericycle maintenance restarted the air compressor and once sufficient pressure was restored to the system the emergency bypass stack cap was closed and normal operations resumed.

During the bypass approximately 87.5m³ of flue gases exited the emergency bypass stack.

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

Yours truly,

Dan Kokol

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



December 21, 2021

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

Dear Christelle Broux,

RE: Stericycle Site Certificate of Approval No. A680324
Use of the Emergency Bypass Stack
Ref #: 5025-C9QYZ

On December 13th, 2021 at approximately 22:50 the emergency bypass stack was opened due to a battery back-up unit fault.

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 thirteen (13) 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 December 13th, 2021 at approximately 23:13 a call was placed to the Spills Action Control center by Stericycle Supervisor Denver D'cruz to report the use of the emergency bypass stack. At approximately 22:50 the incinerator bypass stack opened due to an electrical arch. Stericycle maintenance was trouble shooting/repairing a mechanical issue with the atomizer tank float switch when wires for the switch came loose and grounded out on the atomizer tank. This caused the Battery Back-up unit to fault which shut down the APC system PLC putting the incinerator into an immediate bypass. Stericycle maintenance restarted the APC system and closed the emergency bypass stack cap. The stack was closed at 23:03.

During the bypass approximately 47.4m³ of flue gases exited the emergency bypass stack.

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

Yours truly,

Dan Kokol

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



December 21, 2021

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

Dear Christelle Broux,

RE: Stericycle Site Certificate of Approval No. A680324
Use of the Emergency Bypass Stack
Ref #: 1-1HPB4U

On December 16th, 2021 at approximately 12:30 the emergency bypass stack was opened due to a control fault in the 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 six (6) 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 December 16th, 2021 at approximately 12:40 a call was placed to the Spills Action Control center by Stericycle Operations & Incineration Supervisor Conan Fonseca to report the use of the emergency bypass stack. At approximately 12:30 the incinerator bypass stack opened due to an unknown control system fault that caused the incinerators APC system to shut-down triggering the opening of the emergency bypass stack. The cause of the shut-down is unknown, at the time of the bypass all critical systems were immediately inspected and no faults were found. All monitored parameters appeared to be in the normal operating range. After scrubber was restarted, it was immediately put into shutdown/burn down while the system was monitored and inspected. Nothing was found during this time and no further issues presented themselves. The quench thermocouple connections were checked for security with no issues found. The stack was closed at 12:36.

During the bypass approximately 21.87m³ of flue gases exited the emergency bypass stack.

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

Yours truly,

Dan Kokol

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



January 6, 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 #: 6556-CA8K6N

On December 31st, 2021 at approximately 09:08 the emergency bypass stack was opened due to a power brown-out at the facility.

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 twenty-four (24) 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 December 31st, 2021 at approximately 09:38 a call was placed to the Spills Action Control center by Stericycle EHS Specialist Dan Kokol to report the use of the emergency bypass stack. At approximately 09:08 the incinerator bypass stack opened due to a momentary power brown-out (lights flickered in the office) which caused the cooling tower & I.D. fan VFD's to go offline. Due to the cooling tower and I.D. fan VFD's shut-down the incinerator went positive, which triggered the opening of the emergency bypass stack cap. The VFD's were restarted, and the emergency bypass stack cap was closed.

During the bypass approximately 87.5m³ of flue gases exited the emergency bypass stack.

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

Yours truly,

Dan Kokol

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



October 2021 Incinerator Averages, Temperatures Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp	IDFanTemp°C	QunchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Operating Mode
10/1/2021	Average	11.38	0.34	41.45	914.83	1061.28	6.04	28.48	54.07	25.58	46.78	7.62	7.21	7.73	41.61	40.70	0.10	NORMAL
	Min	8.82	0.00	0.88	830.03	1010.33	5.44	22.84	53.04	18.17	44.14	6.66	6.25	7.41	41.50	40.48	0.00	
	Max	14.46	430.90	190.20	965.46	1119.38	6.61	36.30	54.51	31.37	51.05	8.43	8.06	8.87	41.78	41.11	1.00	
10/2/2021	Average	11.84	1.59	33.81	924.75	1060.55	6.63	30.81	54.45	23.64	47.84	7.09	7.41	8.53	41.58	40.45	0.10	NORMAL
	Min	7.85	0.00	-2.85	883.66	1042.76	6.19	26.00	54.39	16.39	45.17	5.60	7.06	7.08	41.41	40.22	0.00	
	Max	14.49	526.57	169.81	973.86	1079.40	7.06	38.07	54.54	28.45	51.95	7.49	7.77	9.04	41.79	40.62	1.00	
10/3/2021	Average	12.19	1.63	31.27	837.16	1049.97	6.91	32.33	54.45	22.12	47.81	7.23	6.77	7.60	41.35	40.17	0.19	NORMAL
	Min	8.17	0.00	8.93	726.84	956.51	6.45	25.95	54.38	17.49	45.65	5.51	4.53	7.00	39.70	40.03	0.00	
	Max	15.08	20.50	162.98	914.91	1078.04	7.24	36.95	54.52	28.49	49.39	8.54	8.43	9.65	41.68	40.48	1.00	
10/4/2021	Average	11.42	2.43	48.82	936.34	1065.35	6.71	33.44	54.44	21.01	47.58	7.38	7.21	7.52	39.65	40.91	0.62	NORMAL
	Min	8.62	0.00	1.01	857.01	1054.82	6.53	27.16	54.39	16.07	44.35	7.36	7.05	7.40	38.79	40.23	0.00	
	Max	13.82	612.24	190.57	1000.28	1083.53	6.90	38.36	54.51	27.28	50.25	7.43	7.37	7.65	42.59	41.49	1.00	
10/5/2021	Average	11.64	4.34	29.86	977.84	1061.73	6.63	29.97	54.45	24.48	46.36	7.35	7.44	7.45	42.60	41.07	0.52	NORMAL
	Min	9.04	0.00	6.46	922.22	1008.74	6.46	26.51	54.40	20.28	43.94	7.32	7.26	7.24	42.38	40.80	0.00	
	Max	14.31	612.24	202.20	1028.02	1108.43	6.90	38.36	54.51	27.93	50.25	7.43	7.64	7.65	42.77	41.49	1.00	
10/6/2021	Average	11.88	2.44	45.23	959.56	1067.37	6.66	31.95	54.45	22.50	47.74	7.32	7.09	7.52	42.59	41.27	0.96	NORMAL
	Min	9.25	0.00	-35.48	904.93	1043.94	6.43	28.33	54.39	17.15	45.48	6.70	6.16	7.37	42.45	40.87	0.00	
	Max	13.37	686.54	190.83	1026.46	1112.06	6.82	37.29	54.53	26.12	50.82	8.04	7.39	7.69	42.74	41.43	1.00	
10/7/2021	Average	12.29	2.84	37.49	872.47	1054.94	6.81	32.02	54.45	22.43	47.71	7.64	7.27	7.61	42.63	41.44	0.88	NORMAL
	Min	8.35	0.00	5.58	639.77	980.48	6.53	27.10	54.36	17.82	45.00	6.14	6.21	7.06	42.45	41.27	0.00	
	Max	15.55	661.19	237.29	981.68	1078.99	7.09	36.62	54.53	27.34	50.76	8.83	7.76	8.30	42.80	41.68	1.00	
10/8/2021	Average	11.73	3.20	45.79	945.72	1064.38	6.82	32.84	54.45	21.61	47.56	7.26	7.27	7.59	42.75	41.74	0.90	NORMAL
	Min	8.48	0.00	-0.19	922.33	1047.29	6.57	27.72	54.39	17.80	45.00	7.24	7.17	7.47	42.58	41.60	0.00	
	Max	14.18	859.03	372.30	969.00	1098.19	7.01	36.66	54.51	26.74	49.92	7.34	7.41	7.76	42.97	41.96	1.00	
10/9/2021	Average	12.15	3.27	31.75	865.40	1056.62	6.87	31.42	54.36	22.93	46.78	7.38	7.38	7.38	42.67	42.09	0.89	NORMAL
	Min	7.94	0.00	-39.97	708.76	961.97	6.37	25.51	53.57	17.85	43.18	7.23	7.21	6.68	42.55	41.91	0.00	
	Max	20.36	491.25	176.73	960.41	1077.74	7.15	36.66	54.56	28.97	50.35	7.55	7.65	7.72	42.88	42.42	1.00	
10/10/2021	Average	11.97	2.40	40.02	910.73	1061.39	6.92	33.25	54.45	21.20	47.47	7.26	7.28	7.62	42.71	42.45	0.96	NORMAL
	Min	8.76	0.00	5.78	837.13	1022.78	6.77	27.85	54.35	14.44	44.71	7.23	7.17	7.42	42.56	42.07	0.00	
	Max	13.93	428.56	223.70	978.14	1090.07	7.10	40.04	54.54	26.58	50.99	7.59	7.45	7.77	42.98	42.82	1.00	
10/11/2021	Average	11.86	2.58	43.77	884.81	1060.92	6.98	32.95	54.45	21.50	47.83	7.30	7.33	7.58	42.59	42.66	0.97	NORMAL
	Min	8.50	0.00	8.27	726.87	1004.57	6.77	27.75	54.37	16.79	44.53	7.22	7.21	7.32	42.36	42.33	0.00	
	Max	15.11	555.48	175.92	937.14	1081.39	7.18	37.71	54.54	26.72	50.07	7.80	7.64	7.74	42.85	43.08	1.00	
10/12/2021	Average	12.07	4.14	49.40	907.71	1059.91	7.03	35.36	54.47	19.12	48.03	7.48	7.29	7.53	42.60	42.74	1.00	NORMAL
	Min	9.57	0.00	0.97	845.23	1003.81	6.73	29.79	54.39	14.49	45.25	7.16	7.16	7.35	42.43	42.55	1.00	
	Max	15.03	955.80	195.79	952.18	1091.17	7.28	40.02	54.62	24.68	50.20	7.98	7.45	7.72	42.72	42.87	1.00	
10/13/2021	Average	12.28	2.53	43.74	825.81	1064.62	6.96	33.05	54.46	21.41	47.20	7.81	7.36	7.58	42.63	42.84	0.78	NORMAL
	Min	8.18	0.00	1.25	670.27	1020.12	6.73	27.23	54.35	13.36	43.25	7.46	7.16	7.39	42.47	42.51	0.00	
	Max	15.11	395.49	205.12	944.71	1162.01	7.19	41.12	54.58	27.21	51.99	8.38	7.51	7.80	42.81	43.09	1.00	
10/14/2021	Average	11.91	1.77	52.41	934.31	1067.19	6.90	35.72	54.46	18.74	47.23	7.65	7.18	7.49	42.59	42.95	1.00	NORMAL
	Min	9.90	0.00	6.58	924.86	1053.82	6.62	32.41	54.38	15.38	45.42	7.41	7.11	7.36	42.37	42.75	1.00	
	Max	13.72	22.46	276.64	958.61	1114.30	7.20	39.12	54.56	22.00	49.22	7.83	7.29	7.66	42.76	43.13	1.00	
10/15/2021	Average	12.01	2.65	46.56	954.01	1061.96	6.77	32.45	54.44	21.99	46.18	7.33	7.28	7.24	42.58	43.08	1.00	NORMAL
	Min	8.75	0.43	6.02	936.38	1001.29	6.48	27.63	54.39	18.64	44.28	7.25	7.16	6.61	42.39	42.89	1.00	
	Max	14.36	454.77	280.31	984.89	1081.07	7.09	35.78	54.51	26.81	48.15	7.42	7.38	7.68	42.75	43.28	1.00	
10/16/2021	Average	12.29	4.10	29.97	878.80	1057.45	6.16	27.92	54.42	26.50	45.47	7.45	7.42	7.50	42.41	42.86	1.00	NORMAL
	Min	8.29	1.00	5.04	622.50	988.07	5.72	22.59	54.24	19.08	42.55	7.21	7.20	7.18	42.23	42.53	1.00	
	Max	15.29	934.03	182.66	981.48	1083.52	6.49	35.37	54.51	31.84	50.04	7.84	7.79	7.71	42.59	43.29	1.00	
10/17/2021	Average	19.18	0.51	3.33	489.26	420.53	6.26	58.12	44.01	-14.11	28.25	8.23	8.46	9.23	9.83	9.82	0.24	NORMAL/SHUT-DOWN/OFF
	Min	10.96	0.00	0.00	151.56	95.71	5.72	26.05	25.65	-45.51	19.18	7.21	7.24	7.16	0.08	0.00	0.00	
	Max	20.41	4.69	56.94	1004.70	1061.88	6.70	74.52	65.65	28.06	45.95	8.60	8.80	9.83	42.34	42.67	1.00	
10/18/2021	Average	20.25	0.00	0.00	70.28	58.82	6.90	59.41	47.75	-11.66	19.72	8.53	8.80	9.80	0.03	0.00	0.00	OFF
	Min	20.07	0.00	0.00	35.40	39.33	6.70	43.21	46.21	-15.75	18.54	8.50	8.80	9.78	0.00	0.00	0.00	
	Max	20.42	0.00	0.00	151.31	95.60	7.20	63.46	49.86	6.19	21.34	8.60	8.80	9.80	0.08	0.00	0.00	



October 2021 Incinerator Averages, Temperatures Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp	IDFanTemp°C	QunchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	Operating Mode
10/19/2021	Average	20.25	0.00	0.00	32.85	35.64	7.32	60.94	36.04	-24.90	20.96	8.41	8.73	9.80	0.05	0.00	0.00	OFF
	Min	20.09	0.00	0.00	30.93	33.89	7.01	57.68	24.49	-34.97	19.12	8.30	8.68	9.77	0.01	0.00	0.00	
	Max	20.40	0.00	0.00	35.38	39.39	7.80	62.78	47.50	-10.18	22.74	8.50	8.80	9.80	0.10	0.00	0.00	
10/20/2021	Average	20.25	0.00	0.00	83.63	206.91	7.87	63.39	27.69	-35.70	22.10	8.21	8.51	9.80	0.07	0.00	0.00	OFF/START-UP
	Min	20.05	0.00	0.00	32.01	32.77	7.80	56.38	24.83	-45.38	20.34	7.87	8.06	9.80	0.04	0.00	0.00	
	Max	20.44	0.00	0.00	389.78	815.74	8.08	71.61	29.80	-26.68	23.53	8.40	8.70	9.80	0.09	0.00	0.00	
10/21/2021	Average	16.34	1.60	20.93	611.67	942.81	7.52	58.21	35.87	-22.34	30.82	8.19	8.10	8.98	16.01	15.05	0.00	START-UP/NORMAL
	Min	0.00	0.00	0.00	-17.78	-17.78	0.00	-17.78	-17.78	-46.36	-17.78	0.00	0.00	0.00	0.00	0.00	0.00	
	Max	20.43	129.76	143.69	900.72	1107.17	8.04	70.77	56.79	21.29	51.81	8.32	8.50	9.80	44.98	42.33	0.00	
10/22/2021	Average	11.72	1.55	58.24	980.32	1068.84	5.62	29.24	53.35	24.11	46.37	8.00	7.45	7.63	43.38	41.18	0.00	NORMAL
	Min	8.63	0.00	4.88	901.06	1020.48	5.23	24.65	51.26	18.30	43.67	7.48	7.33	7.28	43.07	40.37	0.00	
	Max	13.41	494.20	205.04	1031.92	1160.94	6.45	39.35	57.69	26.67	52.29	8.22	7.53	8.66	43.94	41.99	0.00	
10/23/2021	Average	11.83	0.83	55.72	971.99	1067.88	5.38	25.90	52.08	26.18	44.27	7.40	7.23	7.44	43.18	41.61	0.00	NORMAL
	Min	9.62	0.00	1.69	938.53	1044.34	5.16	21.27	50.80	24.18	43.24	7.29	7.13	7.35	42.97	41.43	0.00	
	Max	13.89	99.33	127.94	1016.89	1092.50	5.57	28.85	53.27	30.86	45.96	7.48	7.33	7.61	43.35	41.78	0.00	
10/24/2021	Average	14.17	1.26	32.06	863.24	905.11	5.66	30.41	48.04	17.62	39.03	7.62	7.48	7.55	35.79	34.50	0.00	NORMAL/SHUT-DOWN/OFF/STA RT-UP
	Min	10.30	0.00	0.00	483.91	132.54	5.06	19.84	26.32	-34.54	13.96	7.26	7.14	7.21	0.07	0.00	0.00	
	Max	20.41	645.11	117.29	1003.44	1090.22	6.50	62.40	53.57	30.92	46.11	8.57	8.31	8.06	43.34	41.88	0.00	
10/25/2021	Average	12.21	0.86	48.76	755.39	1033.03	5.70	27.15	52.21	25.06	44.85	7.53	7.41	7.46	41.12	41.24	0.00	START-UP/NORMAL
	Min	7.34	0.00	11.41	494.83	910.99	5.45	20.74	41.17	7.29	30.29	7.37	7.14	7.18	27.01	27.10	0.00	
	Max	14.68	429.16	159.90	925.68	1097.30	5.84	33.88	53.99	29.63	47.62	8.04	7.85	7.79	41.59	41.99	0.00	
10/26/2021	Average	12.00	2.08	67.39	952.23	1070.03	5.49	26.72	52.17	25.45	45.41	7.54	7.34	7.55	41.42	41.32	0.00	NORMAL
	Min	10.04	0.00	12.74	925.78	1045.68	5.27	21.98	50.72	21.95	43.22	7.35	7.25	7.49	41.13	41.07	0.00	
	Max	13.30	630.97	215.88	968.74	1117.29	5.72	31.29	53.63	28.75	47.49	7.79	7.44	7.65	41.64	41.59	0.00	
10/27/2021	Average	11.92	0.78	61.16	1018.91	1056.55	5.84	27.02	52.91	25.90	46.33	7.60	7.31	7.43	41.02	41.08	0.00	NORMAL
	Min	9.17	0.00	10.44	922.18	1018.13	5.69	21.28	52.29	23.24	45.20	7.31	7.16	7.00	38.78	38.61	0.00	
	Max	14.59	244.99	231.92	1077.26	1087.34	5.99	29.90	53.75	31.65	47.27	9.19	7.43	7.54	41.28	41.84	0.00	
10/28/2021	Average	12.02	0.82	51.07	955.90	1059.59	5.48	24.28	51.52	27.24	45.00	7.54	7.51	7.55	41.51	41.66	0.00	NORMAL
	Min	10.09	0.00	11.37	929.54	1045.69	4.97	18.75	50.33	24.80	43.03	2.78	7.27	7.34	41.13	41.51	0.00	
	Max	14.60	233.25	177.86	990.14	1088.26	5.78	27.97	52.95	32.12	47.03	10.27	8.15	7.97	41.73	41.84	0.00	
10/29/2021	Average	12.06	1.13	51.81	920.13	1049.08	5.75	24.60	51.77	27.17	44.41	8.54	7.33	7.64	41.62	40.79	0.00	NORMAL
	Min	8.60	0.00	0.00	641.13	787.94	5.18	20.61	35.36	9.63	22.04	7.50	7.02	7.29	38.36	38.26	0.00	
	Max	20.35	517.20	174.06	961.96	1088.23	6.08	28.18	53.58	31.47	47.37	9.28	8.81	8.00	43.37	41.61	0.00	
10/30/2021	Average	11.80	3.38	85.66	963.05	1060.44	5.69	23.80	52.50	28.71	45.85	8.18	7.38	7.62	40.89	40.69	0.00	NORMAL
	Min	9.01	0.00	0.29	861.05	1040.91	5.52	20.65	51.63	24.00	44.72	7.28	7.17	7.41	40.07	37.37	0.00	
	Max	14.41	543.66	273.41	1013.26	1091.47	5.90	29.31	53.35	31.99	47.88	8.83	7.52	7.87	41.69	42.65	0.00	
10/31/2021	Average	11.84	2.55	63.26	989.37	1065.95	5.98	29.46	53.62	24.15	47.74	7.33	7.19	7.47	41.02	42.75	0.00	NORMAL
	Min	9.46	0.00	17.18	908.24	1043.34	5.66	23.09	52.60	19.20	45.27	7.18	7.12	7.40	40.85	42.58	0.00	
	Max	14.38	696.51	146.09	1004.34	1090.54	6.09	35.26	54.48	29.60	50.26	7.52	7.29	7.55	41.11	42.93	0.00	



October 2021 Incineration Feed Data

TheDate	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DailySum	Monthly Total
01-Oct-21	601.30	504.00	502.20	504.40	605.10	602.80	599.90	599.40	597.10	505.30	325.80	570.00	599.10	587.00	599.80	159.00	275.30	267.90	0.00	610.80	380.00	0.00	0.00	0.00	9996.20	
02-Oct-21	614.60	594.40	604.50	568.60	503.60	611.00	500.50	584.00	501.20	604.00	516.40	634.20	615.40	343.60	237.40	602.40	617.50	126.20	138.80	0.00	23.80	331.40	62.20	0.00	9935.70	
03-Oct-21	9.70	26.10	0.00	0.00	0.00	284.60	511.00	244.30	602.60	117.70	605.70	0.00	0.00	229.80	605.50	504.00	0.00	0.00	0.00	19.80	602.60	604.20	615.60	569.40	6152.60	
04-Oct-21	602.10	600.20	22.20	35.60	0.00	176.00	400.50	606.50	604.90	381.60	602.10	509.00	603.50	98.60	200.20	378.60	522.30	310.10	365.60	600.40	237.50	482.60	300.90	260.60	8901.60	
05-Oct-21	496.70	602.20	241.70	0.00	0.00	0.00	191.60	507.30	503.20	520.00	505.20	557.70	503.50	512.60	506.60	509.80	503.50	517.20	499.80	503.80	486.70	195.80	577.00	264.20	9706.10	
06-Oct-21	562.90	0.00	508.80	503.50	195.00	201.60	172.60	0.00	502.00	505.40	507.40	511.20	501.90	430.20	501.30	512.90	508.40	500.00	514.30	515.60	618.60	642.40	583.90	0.00	9999.90	
07-Oct-21	0.00	0.00	0.00	0.00	0.00	0.00	505.10	518.20	10.30	624.20	480.30	415.90	519.20	251.90	224.10	493.10	601.10	311.60	198.80	503.40	508.00	443.50	283.00	6891.70		
08-Oct-21	507.40	500.20	510.70	503.70	501.10	501.80	504.60	503.70	616.70	610.30	212.80	384.40	625.90	629.80	133.60	664.50	612.60	431.10	166.40	252.40	595.20	0.00	0.00	0.00	9968.90	
09-Oct-21	323.90	338.40	0.00	0.00	0.00	501.90	25.80	0.00	0.00	0.00	235.50	609.40	264.00	615.00	407.50	467.80	630.10	598.40	3.20	506.40	513.80	504.80	507.90	485.90	7539.70	
10-Oct-21	456.10	502.90	651.80	508.80	503.70	507.80	432.60	573.20	623.60	576.70	606.30	568.60	624.90	626.50	200.60	523.80	516.70	537.40	0.00	448.10	0.00	0.00	0.00	9990.10		
11-Oct-21	480.70	507.00	56.90	603.80	514.20	502.10	200.50	317.70	167.30	618.40	608.00	581.30	611.30	225.10	146.90	197.70	537.40	574.60	233.80	600.60	610.20	601.20	397.20	0.00	9893.90	
12-Oct-21	592.50	611.80	601.50	505.40	0.00	0.00	246.40	641.00	598.30	376.10	605.80	609.80	625.70	531.40	617.80	656.40	631.70	368.00	605.60	526.60	0.00	0.00	0.00	9951.80		
13-Oct-21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	186.20	0.00	136.60	24.70	605.20	498.70	615.20	163.00	540.10	613.40	657.80	610.50	291.80	459.70	609.60	311.70	90.90	6415.10	
14-Oct-21	599.80	607.80	592.60	506.20	596.80	141.30	267.50	488.40	422.80	400.00	423.80	404.80	464.40	416.10	405.10	402.80	407.00	421.90	371.60	600.10	601.60	257.40	0.00	0.00	9799.80	
15-Oct-21	600.60	599.00	603.20	601.40	606.40	505.30	350.60	401.00	400.80	402.30	402.00	402.90	412.20	400.80	400.50	404.00	478.50	404.70	342.10	501.60	507.70	236.20	0.00	0.00	9963.80	
16-Oct-21	663.70	0.00	0.00	0.00	0.00	0.00	611.60	614.00	586.30	606.60	598.50	631.20	0.00	0.00	0.00	0.00	301.60	0.00	192.80	304.10	370.10	603.40	210.00	6293.90		
17-Oct-21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
18-Oct-21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
19-Oct-21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
20-Oct-21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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-Oct-21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	142.90	626.20	607.40	342.80	346.10	599.50	499.60	505.60	500.70	4170.80	
22-Oct-21	500.00	500.00	601.60	386.50	510.80	53.60	300.30	524.00	404.50	0.00	661.40	621.20	371.10	502.70	12.80	609.70	629.00	619.00	205.30	523.40	461.60	346.60	255.10	392.40	9992.60	
23-Oct-21	601.80	522.20	528.50	539.50	544.20	283.20	257.80	456.10	492.40	494.50	496.50	493.50	495.90	503.20	499.90	500.50	501.60	456.30	153.60	504.70	520.20	58.40	0.00	0.00	9904.50	
24-Oct-21	163.10	555.60	524.20	448.10	500.00	0.00	0.00	467.60	500.40	493.50	499.00	498.60	503.20	314.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5468.00	
25-Oct-21	0.00	0.00	0.00	0.00	0.00	379.40	204.40	259.00	0.00	597.70	604.00	649.40	648.20	648.70	644.30	642.40	650.30	597.80	534.20	626.80	629.90	629.40	608.40	9554.30		
26-Oct-21	410.60	502.50	242.00	303.10	335.60	498.50	199.80	383.50	553.80	370.90	317.00	553.30	611.80	533.60	39.60	519.20	633.60	611.10	305.80	419.70	91.20	512.40	608.80	299.50	9856.90	
27-Oct-21	403.40	609.40	0.00	605.40	501.30	127.50	268.20	452.20	606.50	510.40	305.50	0.00	0.00	503.10	508.70	612.60	608.20	601.40	610.80	463.80	622.40	532.50	138.60	408.10	10000.00	
28-Oct-21	584.80	400.30	607.30	604.40	260.40	0.00	0.00	132.90	507.60	500.00	499.60	513.90	516.10	501.20	501.00	502.20	506.50	472.20	181.60	603.10	610.80	603.90	313.90	0.00	9923.70	
29-Oct-21	514.50	499.40	159.00	246.20	0.00	228.60	506.70	494.80	502.60	493.40	454.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	220.10	586.00	500.30	0.00	653.40	621.40	6680.40
30-Oct-21	514.40	527.20	305.00	513.60	0.00	602.00	612.00	425.40	620.60	602.10	230.70	634.90	625.00	416.70	0.00	0.00	632.50	406.80	37.10	0.00	0.00	602.90	649.90	650.00	9608.80	
31-Oct-21	501.90	486.00	500.40	436.20	600.20	545.90	173.80	608.20	658.40	627.90	631.30	635.20	304.70	645.00	648.00	570.00	471.20	255.40	80.50	85.50	529.80	0.00	0.00	0.00	9995.50	



October 2021 CEM Calibration Log

Carbon Monoxide > 8ppm 4 hour alarm

Carbon Monoxide > 8ppm 4 hour alarm

	Start	Stop		Op.	Stack CO @ 11% O ₂	Stack CO as mg/m ³		Actions
Date	Time	Time	Duration	Mode			Explanation	Taken
10/5/2021	3:30	7:00	3:30	Normal	11.98	13.8	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
10/8/2021	22:45	3:00	4:15	Normal	10.39	12.0	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
10/11/2021	10:56	12:00	1:04	Normal	8.2	9.5	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
10/12/2021	23:00	3:00	4:00	Normal	16.82	19.4	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
10/13/2021	16:10	17:00	0:50	Normal	10.76	12.4	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
10/30/2021	7:00	8:00	1:00	Normal	8.23	9.5	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
10/31/2021	22:17	0:00	1:43	Normal	17.88	20.6	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.

Secondary Chamber Temperature < 1000°C

Date	Start Time	Stop Time	Duration	Op. Mode	Temp. °C	Explanation	Actions Taken
10/3/2021	7:19	7:45	0:26	Normal	975	Machine sat idle during shift change	Operator changed the FPA and brought the temperature back up
10/7/2021	5:56	7:11	1:15	Normal	990	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up
10/24/2021	14:54	17:42	2:48	Shut-down	934	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up
10/25/2021	8:10	8:45	0:35	Normal	986	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up

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



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

	Start	Stop		Op.	Quench		Action
Date	Time	Time	Duration	Mode	pH	Explanation	Taken
10/3/2021	1:07	4:13	3:06	Normal	5.72	Low pH levels were caused by a caustic feed pump failure.	Maintence repair the caustic feed pump.
10/28/2021	4:51	8:43	3:52	Normal	4.37	Low pH levels were caused by a caustic feed pump failure.	Maintence repair the caustic feed pump.

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



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

	Start	Stop		Op.	Condenser		Action
Date	Time	Time	Duration	Mode	pH	Explanation	Taken
10/3/2021	10:30	14:08	3:38	Normal	5.35	Low pH levels were caused by a caustic feed pump failure.	Maintence repair the caustic feed pump.
10/3/2021	15:10	18:37	3:27	Normal	5.21	Low pH levels were caused by a caustic feed pump failure.	Maintence repair the caustic feed pump.



November 2021 Incinerator Averages Temperatures and Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp°C	IDFanTemp°C	QunchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	OpMode
11/1/2021	Average	12.28	1.46	60.58	990.45	1066.86	5.34	25.03	50.63	25.60	44.11	7.34	7.41	7.42	41.02	42.74	0.00	
	Min	10.70	0.00	18.33	931.45	1018.53	5.20	21.32	49.37	21.73	42.57	6.85	7.12	7.15	40.68	42.38	0.00	
	Max	14.67	502.21	174.06	1008.14	1087.98	5.66	30.28	52.69	30.87	46.13	8.09	8.25	7.56	41.48	43.00	0.00	
11/2/2021	Average	12.50	2.07	64.45	996.53	1066.04	5.17	26.07	51.28	25.21	44.56	7.30	7.39	7.48	40.81	42.41	0.00	
	Min	11.05	0.00	18.17	942.47	1030.91	4.91	21.77	49.49	22.59	42.25	6.99	7.15	7.23	40.60	42.06	0.00	
	Max	14.73	638.90	211.30	1006.61	1099.88	5.38	31.10	53.84	27.71	46.98	7.46	8.29	7.69	40.92	42.67	0.00	
11/3/2021	Average	12.40	0.38	54.43	967.76	1055.30	4.90	23.08	50.02	26.94	42.96	7.29	7.24	7.54	40.86	42.52	0.00	
	Min	9.56	0.00	14.01	861.99	977.21	4.56	18.63	49.11	23.69	41.13	7.26	7.15	7.40	40.74	42.23	0.00	
	Max	15.24	145.94	231.37	997.88	1089.07	5.12	28.14	51.86	30.92	45.53	7.37	7.48	7.64	41.04	42.84	0.00	
11/4/2021	Average	12.41	2.45	45.61	975.43	1052.55	4.86	22.09	49.55	27.46	41.98	7.73	8.06	7.59	40.82	42.39	0.00	
	Min	9.45	0.00	12.44	853.52	977.80	4.49	17.65	47.96	25.23	40.10	7.17	7.17	7.48	40.74	42.18	0.00	
	Max	15.80	684.43	152.04	1006.33	1085.23	5.12	24.60	50.45	32.17	43.04	8.63	9.23	7.74	40.88	42.57	0.00	
11/5/2021	Average	12.42	2.39	62.20	998.10	1063.14	4.91	23.27	49.91	26.65	42.73	7.87	8.78	7.67	41.29	42.95	0.00	
	Min	10.80	0.00	15.83	978.46	1007.60	4.49	19.64	48.17	24.91	40.76	7.56	8.38	7.48	40.64	42.26	0.00	
	Max	14.90	642.60	201.07	1009.67	1083.46	5.30	26.57	51.49	29.81	44.91	8.87	9.14	7.76	41.93	43.61	0.00	
11/6/2021	Average	12.86	0.20	64.74	991.50	1057.89	5.06	23.97	50.47	26.50	43.28	7.66	8.12	7.59	41.60	42.71	0.00	
	Min	11.26	0.00	20.77	933.69	1001.22	4.45	19.46	48.04	24.23	40.30	7.29	7.18	7.30	41.41	42.36	0.00	
	Max	17.38	77.07	174.66	1008.12	1086.58	5.56	28.11	52.63	28.65	46.01	9.11	9.19	8.05	41.73	43.31	0.00	
11/7/2021	Average	13.40	3.09	49.03	958.74	1050.48	5.42	23.77	51.54	27.77	43.81	7.39	9.06	7.45	41.49	42.29	0.00	
	Min	7.99	0.00	-37.36	823.57	1002.67	4.76	20.66	49.04	26.06	41.52	7.31	8.81	7.16	41.40	41.96	0.00	
	Max	17.54	695.02	123.32	1008.09	1100.09	6.11	28.15	54.27	31.70	46.91	7.55	9.57	7.60	41.60	42.52	0.00	
11/8/2021	Average	13.58	0.90	58.16	873.08	1053.28	5.59	24.52	52.00	27.47	44.13	7.53	9.14	7.49	41.72	42.25	0.00	
	Min	8.97	0.00	-0.08	635.61	987.41	4.79	17.82	49.12	22.49	39.37	7.34	8.48	7.26	41.35	41.94	0.00	
	Max	17.44	335.46	376.92	992.09	1081.16	6.25	31.96	54.49	31.45	48.78	7.99	10.12	7.68	42.29	42.60	0.00	
11/9/2021	Average	10.96	5.12	50.86	966.33	1063.72	5.78	26.20	52.77	26.57	44.78	7.41	8.66	7.56	42.02	42.64	0.27	
	Min	8.13	0.00	-0.15	908.08	1029.08	5.44	21.70	51.39	21.00	42.39	7.30	7.53	6.90	41.87	39.20	0.00	
	Max	13.60	777.44	380.09	1002.51	1146.71	6.13	33.39	54.42	30.74	48.77	7.73	9.29	8.50	42.18	43.16	1.00	
11/10/2021	Average	11.91	1.06	36.82	884.70	1035.49	5.42	28.40	49.66	21.25	41.23	7.52	7.42	7.34	40.65	2.20	0.59	
	Min	8.90	0.00	0.00	595.32	830.77	4.90	17.78	43.63	3.23	28.02	7.28	7.10	6.90	23.46	0.00	0.00	
	Max	20.37	47.83	101.41	988.18	1089.62	5.86	40.60	52.71	31.11	45.58	8.59	8.18	7.83	43.38	38.77	1.00	
11/11/2021	Average	10.91	1.18	46.57	956.11	1052.68	5.53	28.40	51.78	23.39	42.87	7.75	7.39	7.42	43.25	0.00	0.74	
	Min	6.53	0.00	0.00	692.28	883.20	5.22	19.59	50.28	19.54	38.89	7.05	7.19	6.99	42.82	0.00	0.00	
	Max	18.41	83.47	109.58	997.12	1089.49	5.89	32.71	53.35	31.76	45.15	9.66	7.85	7.97	43.71	0.00	1.00	
11/12/2021	Average	11.28	2.11	45.18	983.76	1061.21	5.55	25.79	51.85	26.05	43.13	8.07	7.33	7.48	42.24	0.00	0.59	
	Min	7.37	0.00	0.00	973.42	1013.34	5.07	18.30	50.11	21.02	39.55	7.39	7.19	7.18	39.82	0.00	0.00	
	Max	14.06	376.57	356.79	1003.01	1091.68	5.99	31.77	53.54	32.16	45.84	10.00	7.48	7.73	43.53	0.00	1.00	
11/13/2021	Average	12.62	4.44	53.32	978.37	1059.37	4.99	22.84	49.78	26.94	40.59	7.66	7.17	7.52	39.78	0.00	0.57	
	Min	9.46	0.00	16.42	848.63	1037.90	4.62	15.54	48.50	20.64	37.02	7.34	6.95	7.07	39.58	0.00	0.00	
	Max	15.17	774.48	139.78	999.13	1087.46	5.35	31.71	52.40	34.47	45.27	8.72	7.76	7.85	39.91	0.00	1.00	
11/14/2021	Average	13.06	1.50	48.30	932.78	1053.49	4.91	23.60	49.26	25.66	39.61	7.55	7.27	7.23	39.60	0.00	0.95	
	Min	10.12	0.00	17.84	786.84	996.49	4.56	14.97	47.32	21.37	35.11	7.37	7.15	7.00	39.37	0.00	0.00	
	Max	16.47	98.44	132.26	996.25	1089.86	5.16	29.55	50.94	35.01	42.99	8.73	7.78	7.42	39.86	0.00	1.00	
11/15/2021	Average	12.81	3.57	48.88	961.65	1062.76	4.75	21.56	48.24	26.68	38.51	7.49	7.23	7.31	39.38	0.00	0.92	
	Min	10.82	0.00	12.36	791.20	1041.10	4.44	15.41	47.17	23.31	35.16	7.34	7.14	7.12	38.94	0.00	0.00	
	Max	15.34	614.80	165.06	1011.52	1093.46	5.02	26.11	49.65	32.38	40.96	8.12	7.43	7.53	39.69	0.00	1.00	
11/16/2021	Average	12.89	2.40	53.13	979.70	1058.82	4.82	22.21	48.46	26.25	39.01	8.11	7.28	6.07	39.18	0.01	1.00	
	Min	8.85	0.00	1.63	952.67	990.99	4.48	16.91	47.14	21.84	35.75	7.21	7.11	0.00	38.88	0.00	1.00	
	Max	14.98	718.88	373.43	997.31	1102.56	5.06	29.25	51.10	30.86	43.09	9.35	7.52	7.85	39.47	0.28	1.00	
11/17/2021	Average	13.68	2.06	31.20	885.90	1021.57	5.23	25.71	49.10	23.38	36.98	8.09	7.42	7.94	34.88	6.15	0.81	
	Min	9.01	0.00	0.00	557.25	805.20	4.42	15.93	40.55	-13.03	19.37	7.27	7.14	7.56	0.10	0.00	0.00	
	Max	20.37	463.79	145.55	1004.57	1083.88	6.49	57.94	53.19	31.82	45.40	8.49	8.39	9.87	41.56	41.83	1.00	
11/18/2021	Average	11.81	4.30	40.82	925.56	1055.84	5.34	23.00	49.59	26.59	41.98	8.02	7.34	7.81	41.26	40.63	1.00	
	Min	7.34	0.00	8.94	718.91	993.52	4.71	20.03	47.33	24.36	39.48	7.58	7.17	7.60	41.05	40.20	1.00	
	Max	14.54	696.49	161.62	1007.45	1086.76	6.49	27.63	53.56	30.30	45.77	8.27	7.48	8.01	41.54	40.86	1.00	



November 2021 Incinerator Averages Temperatures and Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp°C	IDFanTemp°C	QunchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	OpMode
11/19/2021	Average	12.20	2.49	41.44	972.67	1054.95	4.71	20.06	47.29	27.23	39.35	7.91	7.36	7.83	41.13	40.71	1.00	
	Min	8.00	0.00	-39.24	781.44	1005.56	4.44	15.90	46.47	24.97	37.45	7.21	7.22	7.70	40.88	40.55	1.00	
	Max	15.24	566.19	365.05	1003.07	1081.84	4.88	23.02	48.07	31.01	40.61	9.10	7.55	7.95	41.46	40.89	1.00	
11/20/2021	Average	11.41	1.34	62.03	946.30	1060.84	4.83	21.48	48.68	27.20	40.72	8.37	7.28	7.71	41.27	40.67	1.00	
	Min	8.86	0.00	1.30	749.23	994.30	4.59	17.72	47.10	23.38	38.21	7.28	7.10	7.48	40.82	40.42	1.00	
	Max	15.33	183.59	371.63	993.42	1090.82	5.11	27.18	50.58	29.93	43.97	9.14	7.54	7.99	41.47	40.92	1.00	
11/21/2021	Average	11.37	1.20	50.68	954.86	1054.48	5.01	20.20	49.25	29.04	41.00	7.71	7.30	7.60	41.21	40.52	1.00	
	Min	7.67	0.00	0.00	903.76	1023.01	4.52	17.53	47.52	26.30	38.89	7.10	7.09	7.38	41.13	40.40	1.00	
	Max	13.89	196.59	380.52	997.32	1080.41	5.27	24.28	50.80	30.43	43.45	8.90	7.90	7.72	41.31	40.67	1.00	
11/22/2021	Average	11.42	2.02	49.00	954.36	1054.80	4.39	17.51	46.98	29.47	38.97	7.60	7.30	7.73	41.27	40.33	1.00	
	Min	8.76	0.00	0.19	852.26	972.01	4.04	13.23	45.92	25.77	36.70	7.24	7.11	7.47	41.10	40.10	1.00	
	Max	15.39	407.99	173.55	1002.76	1085.14	5.14	21.35	49.63	33.81	40.94	7.83	7.66	7.92	41.40	40.50	1.00	
11/23/2021	Average	11.91	2.50	46.43	975.18	1055.30	4.19	16.17	46.88	30.71	39.54	7.33	7.26	7.79	41.33	40.51	1.00	
	Min	8.87	0.00	19.55	821.27	1019.92	3.79	12.60	45.88	26.77	36.84	7.11	6.95	7.69	41.18	40.31	1.00	
	Max	14.38	606.96	154.67	1002.60	1078.46	4.51	20.31	47.36	34.73	41.85	8.03	8.04	7.90	41.42	40.61	1.00	
11/24/2021	Average	12.11	1.80	59.40	936.44	1058.28	4.73	21.02	48.18	27.16	41.92	7.44	7.89	7.67	41.54	40.31	1.00	
	Min	9.88	0.00	19.72	773.88	1024.00	4.21	16.55	45.94	25.09	39.32	6.90	7.30	7.52	41.35	40.12	1.00	
	Max	14.40	532.82	154.34	990.62	1090.46	5.17	24.09	49.50	29.59	43.40	8.27	8.46	7.78	41.68	40.45	1.00	
11/25/2021	Average	12.06	2.53	58.31	886.97	1058.56	5.27	22.22	50.53	28.31	43.08	7.35	7.56	7.75	41.39	40.07	1.08	
	Min	9.58	0.00	17.87	748.00	1023.94	4.84	17.27	48.69	22.24	40.41	7.20	7.30	7.62	41.14	39.88	1.00	
	Max	14.22	668.86	163.93	981.64	1094.17	5.56	31.31	53.67	32.87	48.83	7.59	8.05	7.91	41.66	40.33	2.00	
11/26/2021	Average	12.63	1.14	28.40	826.60	1049.63	4.17	15.01	46.72	31.71	38.79	7.50	7.48	7.78	41.10	40.00	1.00	
	Min	11.92	0.00	16.85	805.63	1030.49	3.89	13.69	45.44	27.88	37.78	7.39	7.21	7.63	40.94	39.85	1.00	
	Max	14.92	9.34	64.80	987.69	1057.94	4.84	17.60	48.89	32.80	40.41	7.57	7.55	7.88	41.24	40.10	1.00	
11/27/2021	Average	12.04	2.26	53.50	960.76	1056.03	4.28	18.45	46.94	28.49	40.43	7.59	7.25	7.67	41.28	40.11	1.00	
	Min	9.97	0.00	19.23	914.77	1003.46	4.19	16.58	46.24	25.40	39.40	7.49	7.12	7.58	41.03	39.96	1.00	
	Max	14.84	560.34	158.26	987.71	1085.47	4.39	22.43	47.88	30.04	42.16	7.75	7.84	7.75	41.47	40.21	1.00	
11/28/2021	Average	12.11	2.17	47.57	946.55	1050.24	4.32	18.42	47.46	29.04	40.08	7.98	7.92	7.71	41.23	39.99	1.00	
	Min	9.45	0.00	17.48	734.23	994.26	4.10	14.59	46.21	25.85	38.08	7.74	7.71	7.53	41.08	39.83	1.00	
	Max	15.08	683.63	178.50	995.28	1079.90	4.56	23.17	49.10	32.57	42.62	8.62	8.60	7.83	41.37	40.08	1.00	
11/29/2021	Average	12.09	2.55	60.73	899.92	1060.87	4.35	20.60	47.87	27.28	40.63	7.58	7.61	7.72	41.49	40.14	1.00	
	Min	9.70	0.00	19.28	731.63	1027.54	4.10	14.94	46.21	25.30	38.21	7.20	7.20	7.53	41.18	39.99	1.00	
	Max	15.08	683.63	178.50	995.28	1085.27	4.56	24.27	49.58	32.57	42.62	8.65	8.60	8.11	41.93	40.47	1.00	
11/30/2021	Average	11.85	3.51	54.84	928.69	1061.15	4.38	22.30	48.77	26.48	41.92	7.96	7.35	7.74	41.41	40.06	1.08	
	Min	9.62	0.30	17.61	745.66	993.18	4.08	17.03	46.55	23.92	38.75	7.36	6.96	7.48	41.21	39.93	1.00	
	Max	13.70	615.09	149.25	988.81	1092.02	4.75	25.54	50.56	29.53	43.90	10.01	8.44	8.66	41.55	40.25	2.00	



November 2021 Incinerator 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
01-Nov-21	510.20	144.40	506.50	454.60	533.80	432.00	328.40	547.40	610.00	578.50	200.20	401.40	402.20	403.20	223.90	443.00	408.20	402.20	481.50	411.50	410.80	235.40	401.90	403.90	9875.1	
02-Nov-21	208.10	520.30	524.60	527.60	262.80	561.60	309.40	499.60	494.00	497.60	479.20	465.80	505.00	497.10	494.60	506.40	502.60	496.40	298.90	611.20	643.80	30.20	0.00	0.00	9936.8	
03-Nov-21	519.40	533.80	326.60	503.90	622.00	610.50	506.60	78.20	491.60	492.80	497.00	501.90	504.30	503.60	500.00	494.10	492.10	507.00	40.00	248.30	262.60	256.20	68.60	0.00	9561.1	
04-Nov-21	146.70	611.20	628.50	615.80	638.90	608.60	609.60	435.40	440.60	587.10	461.70	471.80	459.10	450.60	433.60	466.90	156.10	506.20	311.30	0.00	0.00	334.60	328.50	0.00	9702.8	
05-Nov-21	535.80	556.40	577.20	508.90	208.80	625.00	211.80	511.50	507.80	528.10	514.50	524.20	515.40	526.70	532.30	446.90	510.60	451.30	212.10	503.00	22.30	300.80	131.00	0.00	9962.4	
06-Nov-21	602.00	449.50	460.60	615.90	622.00	401.50	344.40	474.60	443.20	500.70	517.80	504.20	501.30	501.50	506.00	494.30	503.90	510.00	121.00	202.60	167.70	378.70	94.80	0.00	9918.2	
07-Nov-21	602.60	603.80	80.50	505.40	509.60	506.40	504.60	404.40	465.80	485.30	484.00	162.60	405.00	430.40	400.00	409.00	403.80	402.90	320.00	500.60	502.20	254.60	301.60	0.00	9645.1	
08-Nov-21	509.00	154.40	0.00	0.00	0.00	0.00	157.90	238.80	580.00	497.90	502.60	505.90	501.60	501.40	501.40	517.60	502.70	263.00	510.50	381.00	521.00	500.90	137.20	7984.8		
09-Nov-21	616.50	608.60	605.90	0.00	148.40	515.00	512.80	476.60	525.40	69.60	175.50	48.80	0.00	623.00	640.00	644.00	453.80	0.00	0.00	536.30	610.70	421.30	316.80	0.00	8549.0	
10-Nov-21	0.00	0.00	0.00	0.00	0.00	0.00	266.60	531.60	553.40	491.30	560.60	521.90	523.20	220.00	538.20	515.20	611.60	525.10	199.70	271.90	518.00	259.10	607.60	7715.0		
11-Nov-21	602.50	603.50	0.00	606.30	501.60	602.90	301.60	484.50	500.90	520.80	500.20	512.30	0.00	0.00	0.00	0.00	196.00	340.00	507.00	510.80	112.60	506.80	505.90	8416.2		
12-Nov-21	502.20	504.60	501.90	515.50	500.00	512.70	510.40	502.20	505.60	502.30	411.00	441.70	400.90	404.90	404.60	401.20	413.40	403.40	233.20	0.00	503.20	508.90	401.20	0.00	9985.0	
13-Nov-21	501.40	510.40	506.50	522.00	506.10	499.40	245.10	560.40	552.90	551.10	552.00	562.20	505.30	500.60	561.80	565.90	565.10	560.20	176.20	493.70	0.00	0.00	0.00	0.00	9998.3	
14-Nov-21	450.10	452.60	473.00	364.60	451.00	451.30	369.70	137.70	383.20	0.00	505.60	479.50	413.40	484.90	501.40	373.00	504.30	519.00	566.50	39.70	0.00	0.00	0.00	106.20	8026.7	
15-Nov-21	347.40	461.00	260.80	414.20	129.00	303.80	256.00	415.30	411.00	402.70	405.60	411.30	414.80	418.30	421.40	435.70	424.10	512.70	507.20	0.00	0.00	0.00	0.00	234.10	7586.4	
16-Nov-21	517.50	483.60	324.30	415.40	144.70	0.00	0.00	569.10	317.40	500.70	474.50	490.90	499.30	491.30	503.70	501.80	490.60	492.60	247.60	502.10	524.40	502.90	507.00	426.30	9927.7	
17-Nov-21	408.60	423.60	408.60	415.50	407.60	405.90	345.20	164.10	256.80	404.70	447.00	360.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.40	499.00	442.20	0.00	5889.2		
18-Nov-21	501.40	501.00	506.40	522.30	0.00	512.20	511.30	465.30	432.20	478.10	450.90	456.10	452.00	481.40	576.00	473.30	455.10	472.90	140.30	301.20	328.20	371.90	205.70	326.50	9921.7	
19-Nov-21	472.30	0.00	142.20	496.60	410.60	310.50	306.20	499.20	502.20	503.20	453.50	288.00	0.00	0.00	264.80	148.40	518.30	612.00	603.00	208.80	0.00	0.00	0.00	0.00	6740.2	
20-Nov-21	438.90	549.60	540.70	489.80	505.90	505.10	481.70	501.50	497.90	507.40	500.90	494.50	503.20	504.00	501.70	500.90	501.50	498.80	97.80	316.60	362.60	182.80	0.00	0.00	9983.8	
21-Nov-21	506.80	516.20	507.20	549.20	501.70	507.30	505.20	423.30	496.30	496.60	502.80	504.00	512.90	493.70	493.60	500.20	402.90	409.00	0.00	505.00	500.30	164.00	0.00	0.00	9998.2	
22-Nov-21	525.30	501.00	409.90	500.50	501.90	322.60	501.20	498.80	500.50	504.40	498.90	497.90	496.90	496.20	498.80	442.60	402.40	400.20	0.00	508.70	306.80	211.90	281.90	188.30	9997.6	
23-Nov-21	523.70	501.10	511.00	500.60	503.10	499.60	502.20	503.40	412.70	402.60	408.40	418.70	418.60	414.10	420.40	410.90	562.00	421.30	421.80	0.00	0.00	0.00	0.00	272.70	9028.9	
24-Nov-21	425.40	426.40	439.40	514.40	528.30	527.60	507.70	404.40	432.40	417.30	405.30	406.80	407.00	430.40	574.00	411.20	421.80	429.70	0.00	0.00	0.00	0.00	0.00	213.00	8322.5	
25-Nov-21	644.10	378.90	373.00	394.80	578.80	658.40	320.50	490.60	403.90	404.40	401.80	372.70	406.80	284.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6113.0	
26-Nov-21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	263.60	505.20	507.90	510.80	400.60	2188.1		
27-Nov-21	511.00	520.20	456.56	506.50	498.10	525.50	456.57	470.10	453.60	454.40	443.40	457.90	465.40	462.10	437.70	344.10	481.40	451.00	0.00	511.00	449.40	183.50	456.57	0.00	9996.0	
28-Nov-21	507.30	530.00	505.10	507.10	500.80	509.40	454.70	516.40	505.40	519.40	513.90	544.10	506.60	503.00	501.20	514.60	419.80	511.00	0.00	0.00	0.00	0.00	0.00	0.00	9069.8	
29-Nov-21	507.60	548.60	431.60	541.60	568.40	659.90	518.40	450.20	471.20	460.40	352.90	452.80	473.00	472.20	459.80	460.80	485.00	330.00	304.20	0.00	0.00	0.00	0.00	380.90	9329.5	
30-Nov-21	517.80	428.70	517.00	451.50	644.90	503.00	317.20	462.20	499.10	341.30	499.50	349.60	366.70	359.90	388.90	511.10	506.30	503.40	184.10	499.00	504.90	509.10	117.20	0.00	9982.4	

263351.5



November 2021 CEM Calibration Log



O2 6 minute average < 7.5

O2 < 7.5

	Start	Stop		Op.	Stack		Actions
Date	Time	Time	Duration	Mode	O2 %	Explanation	Taken
11/11/2021	19:17	19:25	0:08	Normal	7.0	Minor CO fluctuations caused a momentary drop in the O2 levels.	No waste was fed until O2 levels returned to the normal operating range.
11/12/2021	7:12	7:14	0:02	Normal	7.4	Minor CO fluctuations caused a momentary drop in the O2 levels.	No waste was fed until O2 levels returned to the normal operating range.
11/12/2021	10:20	10:21	0:01	Normal	7.4	Minor CO fluctuations caused a momentary drop in the O2 levels.	No waste was fed until O2 levels returned to the normal operating range.
11/18/2021	3:17	3:18	0:01	Normal	7.3	Minor CO fluctuations caused a momentary drop in the O2 levels.	No waste was fed until O2 levels returned to the normal operating range.

Carbon Monoxide > 8ppm 4 hour alarm

Carbon Monoxide > 8ppm 4 hour alarm

	Start	Stop		Op.	Stack CO @ 11% O ₂	Stack CO as mg/m ³		Actions
Date	Time	Time	Duration	Mode			Explanation	Taken
11/4/2021	20:59	23:00	2:01	Normal	12.12	14.0	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
11/5/2021	15:42	19:00	3:18	Normal	9.68	11.2	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
11/7/2021	11:30	16:00	4:30	Normal	16.87	19.5	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
11/9/2021	11:00	14:00	3:00	Normal	8.37	9.7	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
11/9/2021	16:55	18:00	1:05	Normal	8.88	10.2	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
11/13/2021	21:43	2:00	4:17	Normal	12.8	14.8	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
11/18/2021	7:00	8:00	1:00	Normal	8.23	9.5	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.



Secondary Chamber Temperature < 1000°C

Date	Start Time	Stop Time	Duration	Op. Mode	Temp. °C	Explanation	Actions Taken
11/11/2021	14:07	16:13	2:06	Shut-down	959	Operator went on break and FPA was not adjusted	Operator changed the FPA and brought the temperature back up

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



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

Atomizer Amps < 36

	Start	Stop		Op.	Atom. A	Atom. B		Action
Date	Time	Time	Duration	Mode	amps	amps	Explanation	Taken
11/10/2021	0:13:00	4:24:00	4:11:00	Normal		10.8	Low amperage in atomizer B was caused by a failure of the bearing on the rotary shaft.	Atomizer B was taken offline by maintenance for repair.



December 2021 Incineration Averages, Temperatures Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp	IDFanTemp°C	QunchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	OpMode
12/1/2021	Average	12.18	2.36	54.33	965.56	1056.99	4.56	21.12	49.81	28.70	42.03	7.71	7.24	7.65	41.41	40.02	1.00	NORMAL
	Min	9.66	0.00	-0.05	746.61	997.53	4.32	14.40	48.43	24.52	39.60	7.33	7.11	7.50	41.19	39.71	1.00	
	Max	14.51	453.29	177.82	1000.21	1084.01	4.81	27.10	51.64	34.79	44.85	8.31	7.33	7.88	41.61	40.18	1.00	
12/2/2021	Average	12.20	1.81	71.54	907.34	1063.26	5.33	23.73	50.13	26.40	43.23	7.65	7.29	7.64	41.49	40.06	1.20	NORMAL
	Min	9.10	0.00	0.96	725.80	1021.16	4.48	14.56	43.61	23.07	36.65	6.37	6.99	7.37	41.24	39.87	1.00	
	Max	17.10	101.55	392.10	1000.25	1091.34	5.77	29.10	52.32	34.68	47.07	8.35	7.65	8.14	41.71	40.17	2.00	
12/3/2021	Average	13.16	2.96	67.60	968.13	1055.71	4.40	17.58	48.62	31.04	37.74	7.73	7.26	7.61	41.27	40.05	0.48	NORMAL
	Min	9.23	0.00	0.94	834.38	992.07	4.30	15.12	44.19	27.62	34.10	7.48	7.11	7.46	41.03	39.87	0.00	
	Max	16.35	625.76	318.71	998.44	1084.01	4.55	21.66	49.80	34.13	39.23	8.23	7.47	7.70	41.45	40.19	1.00	
12/4/2021	Average	11.95	1.75	71.78	961.59	1059.39	4.76	21.68	50.47	28.79	40.67	8.02	7.38	7.57	41.47	39.99	0.00	NORMAL
	Min	8.99	0.00	0.00	832.14	998.33	4.36	16.60	48.12	24.77	37.72	7.86	7.20	7.46	41.31	39.90	0.00	
	Max	14.63	149.24	207.71	996.81	1090.33	5.06	27.60	52.39	31.63	42.07	8.30	7.52	7.68	41.54	40.07	0.00	
12/5/2021	Average	12.05	1.76	50.06	853.30	1044.37	4.45	17.79	49.25	31.46	40.00	8.22	7.36	7.61	41.44	40.00	0.00	NORMAL
	Min	8.83	0.00	0.00	568.95	971.80	4.13	14.71	48.17	29.14	38.90	7.49	7.12	7.38	41.23	39.86	0.00	
	Max	16.47	1015.90	172.90	993.20	1076.68	4.88	20.87	50.06	34.24	40.90	9.09	7.68	7.86	41.55	40.14	0.00	
12/6/2021	Average	10.60	1.84	48.97	981.85	1056.84	5.33	23.70	51.84	28.14	43.83	7.53	7.35	7.58	41.48	39.93	0.00	NORMAL
	Min	7.63	0.00	0.93	951.94	998.21	4.45	16.73	48.57	24.05	40.44	7.02	7.13	7.33	41.28	39.63	0.00	
	Max	14.08	242.10	167.05	1011.65	1090.56	6.11	29.35	54.48	31.84	46.73	7.95	8.01	7.77	41.73	40.15	0.00	
12/7/2021	Average	10.73	3.58	41.23	966.10	1055.82	4.21	17.65	48.67	31.02	41.39	7.61	7.32	7.62	41.55	40.03	0.00	NORMAL
	Min	8.07	0.00	11.25	718.60	1009.47	4.03	14.86	47.89	26.98	40.35	7.35	7.14	7.44	41.33	39.66	0.00	
	Max	13.83	652.71	168.97	1007.96	1083.22	4.45	22.31	49.35	33.63	43.09	9.00	8.03	7.72	41.85	40.24	0.00	
12/8/2021	Average	10.62	2.06	64.48	902.92	1065.76	4.38	23.91	50.89	26.98	44.85	7.81	7.38	7.51	41.58	40.00	0.00	NORMAL
	Min	7.47	0.00	15.40	691.00	1019.00	4.01	14.61	48.33	21.14	41.23	7.60	7.24	7.38	41.46	39.89	0.00	
	Max	13.76	543.80	250.73	961.58	1090.71	4.66	33.23	54.38	33.80	49.11	8.93	7.86	7.65	41.70	40.07	0.00	
12/9/2021	Average	10.07	0.88	67.21	903.01	1062.22	4.30	20.73	49.59	28.85	43.53	7.62	7.37	7.70	41.30	39.99	0.00	NORMAL
	Min	7.53	0.00	21.14	693.47	1023.06	4.06	14.97	47.45	24.95	41.22	7.32	7.14	7.40	41.05	39.85	0.00	
	Max	13.04	29.97	166.46	972.52	1088.43	4.48	27.57	52.53	33.05	46.70	7.80	7.89	8.08	41.84	40.16	0.00	
12/10/2021	Average	10.11	3.17	48.98	970.33	1055.94	4.59	20.69	50.34	29.64	44.66	7.58	7.30	7.70	41.60	40.30	0.00	NORMAL
	Min	7.51	0.00	19.52	901.73	1010.21	4.27	16.03	48.41	24.67	42.21	7.37	7.14	7.53	41.14	39.98	0.00	
	Max	12.78	650.40	141.80	1000.61	1087.59	4.99	27.88	52.59	33.81	47.88	7.84	7.62	7.88	42.24	40.72	0.00	
12/11/2021	Average	9.80	2.37	55.91	982.72	1061.20	5.29	23.98	51.77	27.78	46.21	7.59	7.26	7.71	41.42	39.88	0.00	NORMAL
	Min	7.33	0.00	0.77	948.19	1033.27	4.47	16.93	48.81	20.77	42.78	7.37	7.12	7.57	41.05	39.63	0.00	
	Max	11.74	385.88	382.09	998.26	1087.96	6.50	33.71	54.51	32.00	50.56	8.00	7.43	7.85	42.00	40.17	0.00	
12/12/2021	Average	10.49	3.27	48.90	943.53	1052.44	4.53	18.67	48.91	30.24	42.85	7.78	7.28	7.83	41.04	39.84	0.00	NORMAL
	Min	7.58	0.00	23.01	865.41	1001.40	4.20	15.52	47.24	24.55	41.19	7.39	7.16	7.62	40.68	39.59	0.00	
	Max	13.49	544.40	137.29	991.26	1087.63	4.91	26.92	51.51	33.12	46.33	8.18	7.51	8.05	41.75	40.00	0.00	
12/13/2021	Average	10.25	2.48	66.44	961.05	1065.70	4.85	22.74	50.64	27.90	44.97	7.82	7.26	7.75	41.14	39.90	0.00	NORMAL
	Min	8.27	0.00	21.33	919.56	1036.27	4.53	15.63	48.73	23.53	41.39	7.46	7.11	7.44	40.69	39.61	0.00	
	Max	12.66	739.46	170.27	982.97	1109.10	5.11	29.29	53.00	33.19	48.59	8.05	7.40	8.02	41.45	40.12	0.00	
12/14/2021	Average	10.74	2.99	55.65	974.89	1060.93	4.70	24.16	50.86	26.69	45.22	8.06	7.25	7.72	40.95	39.75	0.00	NORMAL
	Min	8.37	0.00	0.00	957.16	975.79	4.49	19.90	47.92	23.30	40.20	7.82	7.14	7.52	37.40	36.30	0.00	
	Max	20.36	566.99	121.42	997.90	1098.61	4.97	30.07	53.37	29.24	48.63	8.26	7.43	7.87	41.31	40.04	0.00	
12/15/2021	Average	10.12	2.80	46.86	976.26	1055.07	5.05	20.48	49.62	29.14	43.00	8.01	7.33	7.76	40.83	39.81	0.00	NORMAL
	Min	7.75	0.00	3.83	932.04	995.20	4.55	16.54	47.58	24.82	39.71	7.46	7.15	7.35	37.45	36.00	0.00	
	Max	13.19	574.00	124.19	1003.24	1085.14	5.40	24.54	51.15	33.06	45.42	8.55	7.70	8.53	41.67	40.88	0.00	
12/16/2021	Average	10.83	2.67	36.18	942.67	1053.49	5.72	22.53	52.24	29.71	46.41	7.49	7.31	7.80	41.12	39.78	0.00	NORMAL
	Min	6.63	0.00	0.00	854.19	1033.29	4.56	15.68	50.55	23.51	43.70	7.36	7.20	7.46	39.19	37.81	0.00	
	Max	19.51	423.06	372.86	990.09	1079.59	6.48	30.52	54.45	34.87	49.18	7.63	7.51	8.06	41.81	40.47	0.00	
12/17/2021	Average	11.57	1.22	43.66	765.98	1050.04	4.33	16.88	49.27	32.40	43.35	7.65	7.36	8.00	41.45	39.63	0.00	NORMAL
	Min	7.89	0.00	17.86	448.82	986.91	3.96	13.91	47.79	28.62	41.99	7.46	7.07	7.86	41.27	39.46	0.00	
	Max	14.60	344.69	122.97	972.15	1087.39	4.56	20.28	50.58	35.65	44.52	7.80	7.78	8.17	41.76	39.89	0.00	
12/18/2021	Average	10.75	0.75	60.77	982.40	1059.87	4.14	18.17	49.09	30.92	43.32	7.64	7.29	7.91	41.33	39.68	0.00	NORMAL
	Min	8.37	0.00	17.93	923.20	1021.36	3.84	13.92	48.01	27.14	42.19	7.49	7.14	7.74	41.12	39.43	0.00	
	Max	14.02	133.30	156.95	1003.00	1089.01	4.42	23.30	50.80	34.84	45.33	7.87	7.47	8.12	41.47	39.91	0.00	



December 2021 Incineration Averages, Temperatures Ranges

TheDate		OX6min	COmin	NOXmin	PrimTemp°C	SecTemp°C	SNCR	DemTemp°C	CarbTemp°C	DiffTemp	IDFanTemp°C	QunchPH	CondPH	AtomPH	AtomA	AtomB	HEPADP	OpMode
12/19/2021	Average	19.05	0.00	15.85	415.81	429.57	4.16	32.87	38.52	5.65	25.63	7.86	7.65	8.09	15.11	14.32	0.00	NORMAL/SHUT-DOWN/OFF
	Min	13.00	0.00	0.00	174.74	141.26	3.61	10.48	29.65	-23.78	9.39	7.61	7.33	7.68	0.00	0.00	0.00	
	Max	20.41	0.26	105.36	942.78	1041.62	4.73	55.86	49.16	38.46	42.33	8.28	7.94	8.71	42.71	39.85	0.00	
12/20/2021	Average	20.25	0.00	0.00	109.49	86.51	5.14	41.08	26.06	-15.02	15.89	8.16	7.73	8.72	0.00	0.00	0.00	OFF
	Min	20.07	0.00	0.00	59.59	45.63	4.74	40.56	22.21	-18.38	15.00	8.03	7.70	8.70	0.00	0.00	0.00	
	Max	20.42	0.00	0.00	174.59	141.11	5.66	41.79	31.25	-10.42	17.21	8.20	7.80	8.80	0.01	0.00	0.00	
12/21/2021	Average	20.25	0.00	0.00	51.27	41.84	5.81	40.56	22.22	-18.33	15.00	8.20	7.70	8.70	0.00	0.00	0.00	OFF
	Min	20.11	0.00	0.00	44.84	38.89	5.67	40.56	22.22	-18.33	15.00	8.20	7.70	8.70	0.00	0.00	0.00	
	Max	20.40	0.00	0.00	59.56	45.62	5.90	40.56	22.22	-18.33	15.00	8.20	7.70	8.70	0.00	0.00	0.00	
12/22/2021	Average	20.25	0.00	0.00	51.22	41.82	5.81	40.56	22.22	-18.33	15.00	8.20	7.70	8.70	0.00	0.00	0.00	OFF
	Min	20.11	0.00	0.00	44.84	38.89	5.67	40.56	22.22	-18.33	15.00	8.20	7.70	8.70	0.00	0.00	0.00	
	Max	20.40	0.00	0.00	59.56	45.62	5.90	40.56	22.22	-18.33	15.00	8.20	7.70	8.70	0.00	0.00	0.00	
12/23/2021	Average	20.25	0.00	0.00	51.18	41.80	5.82	40.56	22.22	-18.33	15.00	8.20	7.70	8.70	0.00	0.00	0.00	OFF
	Min	20.11	0.00	0.00	44.84	38.89	5.67	40.56	22.22	-18.33	15.00	8.20	7.70	8.70	0.00	0.00	0.00	
	Max	20.40	0.00	0.00	59.56	45.62	5.90	40.56	22.22	-18.33	15.00	8.20	7.70	8.70	0.00	0.00	0.00	
12/24/2021	Average	20.25	0.00	0.00	51.14	41.78	5.82	40.56	22.22	-18.33	15.00	8.20	7.70	8.70	0.00	0.00	0.00	OFF
	Min	20.11	0.00	0.00	44.84	38.89	5.67	40.56	22.22	-18.33	15.00	8.20	7.70	8.70	0.00	0.00	0.00	
	Max	20.40	0.00	0.00	59.56	45.62	5.90	40.56	22.22	-18.33	15.00	8.20	7.70	8.70	0.00	0.00	0.00	
12/25/2021	Average	20.25	0.00	0.00	51.10	41.76	5.82	40.56	22.22	-18.33	15.00	8.20	7.70	8.70	0.00	0.00	0.00	OFF
	Min	20.11	0.00	0.00	44.84	38.89	5.67	40.56	22.22	-18.33	15.00	8.20	7.70	8.70	0.00	0.00	0.00	
	Max	20.40	0.00	0.00	59.56	45.62	5.90	40.56	22.22	-18.33	15.00	8.20	7.70	8.70	0.00	0.00	0.00	
12/26/2021	Average	20.25	0.00	0.00	142.97	225.57	5.87	40.63	19.62	-21.01	10.99	8.03	7.56	8.37	0.03	0.00	0.00	OFF/START-UP
	Min	20.07	0.00	0.00	44.84	38.89	5.51	39.75	11.75	-28.19	-0.33	7.22	6.98	7.29	0.00	0.00	0.00	
	Max	20.40	0.00	0.00	404.66	731.49	6.10	41.67	22.22	-18.33	15.00	8.20	7.70	8.70	1.13	0.92	0.00	
12/27/2021	Average	11.68	3.37	41.51	699.30	957.06	6.45	30.57	40.40	9.82	33.72	7.81	7.51	7.81	37.87	37.83	0.00	START-UP/NORMAL
	Min	-0.52	0.00	0.00	404.81	723.93	5.23	16.55	12.00	-27.64	-0.30	7.43	7.11	7.04	1.40	1.19	0.00	
	Max	20.37	546.93	125.20	1008.19	1092.26	6.66	39.81	54.48	25.68	43.55	8.17	7.88	8.15	40.45	40.55	0.00	
12/28/2021	Average	10.16	3.25	51.07	972.26	1054.04	6.61	31.46	54.44	22.98	41.43	8.19	7.54	7.83	40.31	40.19	0.00	NORMAL
	Min	6.71	0.00	0.04	833.03	1002.16	6.59	27.40	54.39	18.08	37.88	7.45	7.27	7.67	40.11	39.90	0.00	
	Max	13.14	349.69	133.24	1008.20	1091.44	6.71	36.34	54.50	27.03	44.54	8.50	7.91	7.91	40.46	40.31	0.00	
12/29/2021	Average	11.41	3.57	47.11	982.60	1049.77	6.60	28.67	54.06	25.39	42.20	7.58	7.66	7.82	39.73	31.06	0.04	NORMAL
	Min	6.65	0.00	1.96	806.33	979.71	6.59	22.40	52.16	19.71	39.48	6.97	7.29	6.99	37.67	0.00	0.00	
	Max	16.94	663.93	150.52	1013.93	1090.04	6.63	33.70	54.49	31.49	45.92	8.22	9.13	8.68	41.55	40.57	1.00	
12/30/2021	Average	11.95	2.72	59.43	956.82	1057.71	6.60	32.56	54.45	21.89	44.41	7.62	7.46	7.96	39.72	39.69	0.00	NORMAL
	Min	9.37	0.00	17.96	912.97	984.06	6.59	28.03	54.38	17.41	42.38	7.23	7.30	7.69	39.54	39.50	0.00	
	Max	14.82	580.09	157.13	992.53	1093.07	6.62	37.05	54.53	26.42	47.13	7.94	7.68	8.13	39.90	39.80	0.00	
12/31/2021	Average	13.41	10.12	54.64	808.66	1036.48	6.66	28.93	54.68	25.75	41.75	7.82	7.71	7.42	40.34	39.12	0.00	NORMAL/SHUT-DOWN/NORMAL
	Min	3.34	0.00	-0.28	386.52	941.80	6.55	23.19	54.32	16.72	37.78	7.29	7.07	6.99	39.05	37.75	0.00	
	Max	20.36	832.35	151.15	1011.48	1147.98	7.30	37.72	57.26	32.66	46.62	9.21	8.40	8.05	43.17	39.72	0.00	



December 2021 Incineration Feed Data

TheDate	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	DailySum	Monthly Total
01-Dec-21	503.10	502.30	517.20	565.00	513.70	502.60	505.80	486.40	490.40	493.90	0.00	286.80	459.50	488.70	452.10	165.70	494.40	509.60	293.50	0.00	0.00	0.00	0.00	82.00	8312.70	
02-Dec-21	528.20	530.40	584.70	399.20	458.80	618.30	335.70	457.30	451.50	450.30	453.80	289.10	458.00	457.30	533.60	464.70	326.20	461.60	153.80	0.00	0.00	0.00	0.00	0.00	8412.50	
03-Dec-21	503.60	502.50	502.80	505.00	511.30	505.20	475.20	406.20	480.90	500.60	0.00	502.80	501.00	500.00	400.30	476.40	477.10	512.20	500.90	0.00	0.00	0.00	0.00	308.90	9072.90	
04-Dec-21	613.80	490.60	430.70	481.40	638.60	553.90	313.80	405.80	427.60	403.20	400.60	420.80	0.00	476.50	404.80	400.10	400.80	402.20	264.00	506.90	505.00	502.70	504.40	0.00	9948.20	
05-Dec-21	513.70	501.00	502.50	0.00	0.00	0.00	0.00	0.00	0.00	35.10	506.40	505.50	496.90	503.90	492.30	489.40	498.00	501.40	210.60	506.00	509.20	241.60	501.60	425.80	7940.90	
06-Dec-21	504.20	509.50	513.00	504.60	507.00	611.30	349.20	486.50	501.30	478.40	488.00	454.20	473.20	476.50	487.00	403.80	406.70	400.10	0.00	502.10	504.60	437.80	0.00	0.00	9999.00	
07-Dec-21	538.10	516.00	507.80	503.90	502.10	502.70	308.30	468.50	413.90	407.30	314.60	404.40	416.50	411.00	404.00	0.00	396.30	406.90	0.00	0.00	0.00	0.00	203.00	7625.30		
08-Dec-21	541.30	369.50	596.30	596.10	613.50	607.70	326.90	405.40	405.30	400.20	461.70	458.90	470.40	452.60	450.70	455.80	456.30	459.40	450.00	0.00	0.00	0.00	0.00	523.70	9501.70	
09-Dec-21	660.20	613.80	528.10	503.30	611.70	587.20	339.30	447.90	450.20	467.40	482.20	441.50	417.90	400.80	441.70	405.00	397.00	233.50	250.30	501.80	342.70	200.90	208.30	0.00	9932.70	
10-Dec-21	502.20	509.70	506.80	521.10	532.60	506.40	302.10	473.80	464.40	452.10	459.70	452.00	456.00	408.60	460.80	450.60	460.20	458.60	28.40	0.00	0.00	608.30	622.10	175.00	9811.50	
11-Dec-21	523.60	507.80	511.10	549.10	509.50	492.80	454.90	465.90	455.50	474.10	453.30	461.00	458.90	384.50	462.90	470.50	490.40	490.90	0.00	502.50	504.30	371.80	0.00	0.00	9995.30	
12-Dec-21	509.70	497.00	497.50	509.80	499.80	515.60	435.00	403.30	433.90	466.50	416.60	408.60	462.40	415.00	440.80	456.00	425.10	476.80	195.10	509.50	226.30	416.00	292.60	0.00	9908.90	
13-Dec-21	418.70	608.10	301.30	300.60	398.20	637.60	349.70	455.50	452.50	469.40	455.60	456.10	468.20	454.90	133.90	462.70	463.30	468.30	257.10	519.60	621.20	614.70	232.20	0.00	9999.40	
14-Dec-21	505.10	520.40	521.00	501.60	505.70	545.50	221.80	455.30	453.20	439.80	455.60	450.90	454.60	450.60	461.80	451.40	461.00	458.10	101.60	519.70	306.30	317.60	233.50	0.00	9792.10	
15-Dec-21	507.80	525.60	506.50	383.20	502.30	512.30	396.90	410.80	455.40	424.90	454.20	452.10	459.60	453.20	449.40	451.00	454.70	451.00	101.60	403.20	404.10	408.20	288.60	0.00	9856.60	
16-Dec-21	402.50	423.30	420.40	515.10	404.90	406.40	486.00	450.00	441.10	0.00	484.70	451.70	243.20	0.00	0.00	43.20	513.40	506.80	507.20	0.00	0.00	0.00	0.00	0.00	6699.90	
17-Dec-21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	273.00	473.20	459.00	454.30	457.40	467.20	454.40	457.00	441.60	467.80	509.70	188.80	0.00	0.00	316.80	336.80	452.80	6209.80	
18-Dec-21	500.50	514.30	609.10	483.80	504.90	318.40	182.80	455.20	268.40	452.30	450.20	455.50	451.20	453.30	450.00	450.80	450.80	457.70	93.00	499.30	505.70	504.70	3.40	0.00	9515.30	
19-Dec-21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
20-Dec-21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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-Dec-21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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-Dec-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		
23-Dec-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		
24-Dec-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		
25-Dec-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		
26-Dec-21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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-Dec-21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	456.20	451.60	455.10	461.80	513.30	506.90	505.90	371.40	462.70	70.80	452.00	130.80	4838.50
28-Dec-21	0.00	0.00	0.00	449.40	455.60	469.80	465.20	0.00	445.30	503.60	494.10	505.50	332.80	507.40	494.30	494.70	502.10	454.70	102.50	502.30	506.60	504.80	505.90	9201.40		
29-Dec-21	504.20	516.50	467.00	506.40	510.50	505.20	509.80	464.40	473.60	462.40	389.00	404.10	0.00	0.00	0.00	0.00	275.00	108.80	504.90	512.60	516.70	465.40	100.30	505.80	180.40	8883.00
30-Dec-21	502.90	427.60	451.00	461.20	450.00	527.60	407.00	472.80	453.50	521.00	509.00	500.10	511.90	513.60	474.50	455.40	472.40	457.50	486.50	455.50	302.70	0.00	0.00	0.00	9999.70	
31-Dec-21	506.20	500.90	501.00	453.20	553.80	568.50	236.50	372.90	463.10	13.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	283.50	7.00	0.00	0.00	0.00	4460.40		



December 2021 CEM Calibration Log



O2 6 minute average < 7.5

O2 < 7.5

	Start	Stop		Op.	Stack		Actions
Date	Time	Time	Duration	Mode	O2 %	Explanation	Taken
12/11/2021	0:25	0:26	0:01	Normal	7.4	Minor CO fluctuations caused a momentary drop in the O2 levels.	No waste was fed until O2 levels returned to the normal operating range.
12/11/2021	3:05	3:06	0:01	Normal	7.3	Minor CO fluctuations caused a momentary drop in the O2 levels.	No waste was fed until O2 levels returned to the normal operating range.
12/16/2021	3:13	3:17	0:04	Normal	7.1	Minor CO fluctuations caused a momentary drop in the O2 levels.	No waste was fed until O2 levels returned to the normal operating range.
12/16/2021	7:16	7:19	0:03	Normal	7.3	Minor CO fluctuations caused a momentary drop in the O2 levels.	No waste was fed until O2 levels returned to the normal operating range.
12/27/2021	23:05	23:06	0:01	Normal	7.4	Minor CO fluctuations caused a momentary drop in the O2 levels.	No waste was fed until O2 levels returned to the normal operating range.
12/28/2021	23:38	23:43	0:05	Normal	7.0	Minor CO fluctuations caused a momentary drop in the O2 levels.	No waste was fed until O2 levels returned to the normal operating range.
12/29/2021	1:59	2:04	0:05	Normal	7.0	Minor CO fluctuations caused a momentary drop in the O2 levels.	No waste was fed until O2 levels returned to the normal operating range.
12/29/2021	2:09	2:11	0:02	Normal	7.4	Minor CO fluctuations caused a momentary drop in the O2 levels.	No waste was fed until O2 levels returned to the normal operating range.
12/29/2021	2:50	2:53	0:03	Normal	7.3	Minor CO fluctuations caused a momentary drop in the O2 levels.	No waste was fed until O2 levels returned to the normal operating range.
12/29/2021	5:55	5:58	0:03	Normal	7.2	Minor CO fluctuations caused a momentary drop in the O2 levels.	No waste was fed until O2 levels returned to the normal operating range.
12/29/2021	9:37	9:44	0:07	Shut-down	5.0	Minor CO fluctuations caused a momentary drop in the O2 levels.	No waste was fed until O2 levels returned to the normal operating range.

Carbon Monoxide > 8ppm 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/m³	Explanation	Taken
12/7/2021	14:22	18:00	3:38	Normal	9.37	10.8	CO spike occurred during the cycling of the internal rams due to a limit switch error.	Maintenance repaired the limit switch. No waste was fed until the CO levels returned to the normal operating range.
12/10/2021	18:00	20:00	2:00	Normal	8.15	9.4	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
12/12/2021	12:39	15:00	2:21	Normal	8.39	9.7	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
12/12/2021	19:42	21:00	1:18	Normal	9.06	10.5	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
12/14/2021	4:57	6:00	1:03	Normal	9.68	11.2	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
12/15/2021	22:43	3:00	4:17	Normal	9.39	10.8	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
12/28/2021	13:00	14:00	1:00	Normal	8.79	10.1	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
12/29/2021	10:30	13:00	2:30	Normal	9.43	10.9	Series of small spikes caused by waste falling over inside the machine	Operator monitored the machine and slowed feeding as needed.
12/31/2021	8:30	15:00	6:30	Normal	58.76	67.8	High CO levels were caused by a failure of the flame port air variable fan drive.	The incinerator was brought to a controlled shut-down. No waste was fed during this period.

Carbon Monoxide > 8ppm 12 hour alarm



Carbon Monoxide > 8ppm 12 hour alarm

	Start	Stop		Op.	Stack CO @ 11% O ₂	Stack CO as mg/m ³		Actions
Date	Time	Time	Duration	Mode			Explanation	Taken
12/31/2021	9:00	23:00	14:00	Normal	26.6	30.7	High CO levels were caused by a failure of the flame port air variable fan drive.	The incinerator was brought to a controlled shut-down. No waste was fed during this period.

Secondary Chamber Temperature < 1000°C

Date	Start Time	Stop Time	Duration	Op. Mode	Temp. °C	Explanation	Actions Taken
12/5/2021	6:05	8:13	2:08	Normal	983	Machine sat idle during shift change	Operator changed the FPA and brought the temperature back up
12/31/2021	18:48	0:00	5:12	Normal	961	Low upper chamber temp caused by failure to the flame port air variable drive.	The incinerator was brought to a controlled shut-down. 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
12/29/2021	11:44:00	19:19:00	7:35:00	Normal	40.7	13.3	Low amperage in atomizer B was caused by a coupling failure.	Stericycle maintenance repaired the coupling and the atomizer was restarted.