



REPUBLIC
SERVICES

28470 Citrin Drive Romulus, MI 48174
o 734 946.1000 republicservices.com

September 9th, 2022

Mr. Allan Batka
United States Environmental Protection Agency
Region 5 (WU-16J)
77 West Jackson Blvd.
Chicago, IL 60604

Re: RIES Monthly Report

Dear Mr. Batka:

Republic Industrial and Energy Solutions, LLC (RIES) hereby submits the Hundred and First Monthly Report ("MR") in conformance with the requirements of its two EPA UIC permits (#s MI-163-1W-C010 & MI-163-1W-C011). RIES is providing all the attached information in the same sequence as required by both subject permits, i.e. Part II. D.1 (a-i), Part III, Attachment A, and Part III, Attachment E.G.2 & E.I.

RIES accepted F039 waste in July of 2022 so as stated on page A-3 of RIES's two EPA UIC permits an analysis is required and is included in this report. Samples were received by the third-party laboratory on August 3rd, 2022. Analyses were not received by RIES until September 9th, 2022. This report is submitted as timely as possible upon the receipt of the F039 analyses by RIES.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my supervision and interaction with the persons who manage and operate the system, and those persons responsible for the collection of the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

We trust that you find this report satisfactory, however, if you have any questions or comments, please feel free to contact us.

Sincerely,



John Frost

cc: Rick Sauve (Republic Services)

AVERAGE INJECTION RATE

Calculation of Average Injection Rate

CURRENT REPORTING YEAR 2022

CURRENT REPORTING MONTH July

Date (month, year) of the first injection into either well at the Citrin Road Facility
November 2013

CURRENT MONTH (all volumes in gallons)

	Injected Waste	Injected Non-Waste	Total injected
MI-163-1W-C010 , Well #1-12			
Current Month	143,179	0	143,179
Since facility first injected			48,975,265
MI-163-1W-C011, Well #2-12			
Current Month	789,325	0	789,325
Since facility first injected			28,545,836
		Lifetime Combined	77,521,101

Conversion factors

365.25 days per year ÷ 12 months per year = 30.4375 days per month

30.4375 days per month × 1440 minutes per day = 43,830 minutes per month

Calculations

Whole number of months of injection 103

103 lifetime number of months of injection × 43,830 minutes/month
= 4,514,490 minutes of injection

Lifetime combined injected volume 77,521,101 ÷ 4,514,490 minutes of injection
= 17.17 gpm average injection rate

WELL 1 DATA

Comment on Well 1 Data

On 7-11-22, injection pressure gauges, annulus pressure gauges, and injection flow meter was calibrated by utilities instrumentation services. No waste injection occurred during the duration of the pressure gauge calibration. Extreme injection pressure, annulus pressure, and differential pressure values occurred during gauge calibration and are not reflective of actual injection parameters.



Injection Well 1, July 2022

	Injection Pressure (psig)		Annulus Tank Level (inch)		Annulus Pressure (psig)		Injection pH		Flow Rate (gpm)		Differential Pressure (psig)	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
7/1/2022	120.2	123.8	26.6	26.7	841.6	846.5	2.0	2.0	0.0	0.0	720.1	724.9
7/2/2022	117.7	120.8	26.5	26.7	838.2	842.6	1.9	2.0	0.0	0.0	719.2	722.8
7/3/2022	113.6	118.3	26.5	26.7	834.0	839.2	1.9	2.0	0.0	0.0	719.7	721.5
7/4/2022	110.8	114.0	26.5	26.7	830.7	835.1	1.9	2.0	0.0	0.0	719.5	721.5
7/5/2022	108.7	111.1	26.6	26.7	827.7	831.8	2.0	2.0	0.0	0.0	718.9	721.2
7/6/2022	107.7	114.0	26.5	26.6	826.5	828.7	1.8	7.2	0.0	0.0	713.7	720.1
7/7/2022	112.5	126.5	26.5	26.7	826.2	837.9	5.8	7.0	0.0	0.0	710.0	716.1
7/8/2022	113.7	130.4	26.6	26.7	825.3	828.2	5.4	7.1	0.0	0.0	707.6	715.0
7/9/2022	112.8	117.7	26.5	26.6	821.5	826.3	6.9	6.9	0.0	0.0	707.6	709.6
7/10/2022	109.5	113.2	26.5	26.6	818.1	822.4	6.9	7.0	0.0	0.0	708.2	709.6
7/11/2022	-0.2	1001.9	26.5	26.6	-1,799.6	1,038.6	6.9	7.0	0.0	0.0	-1802.0	2617.4
7/12/2022	13.4	15.7	26.6	26.6	816.9	818.8	5.5	7.0	0.0	0.0	802.0	804.6
7/13/2022	13.7	15.2	26.5	26.6	815.7	818.3	5.4	7.3	0.0	0.0	800.9	803.6
7/14/2022	13.8	16.5	26.5	26.6	814.5	816.6	7.1	7.2	0.0	0.0	798.4	802.2
7/15/2022	14.0	16.7	26.5	26.7	813.2	815.4	7.1	7.2	0.0	0.0	797.5	800.5
7/16/2022	14.1	15.2	26.5	26.6	809.7	814.5	7.1	7.1	0.0	0.0	795.3	799.5
7/17/2022	12.7	14.5	26.5	26.6	806.3	810.5	7.1	7.1	0.0	0.0	793.1	796.3
7/18/2022	2.7	14.5	26.5	26.6	805.0	807.1	7.1	7.1	0.0	0.0	792.9	798.5
7/19/2022	9.7	14.8	26.6	26.7	804.6	807.1	7.1	7.1	0.0	0.0	790.0	797.7
7/20/2022	1.0	14.7	26.6	26.7	803.3	806.5	7.1	7.1	0.0	0.0	789.2	815.0
7/21/2022	7.3	14.3	26.6	26.7	802.7	806.0	7.0	7.1	0.0	0.0	789.2	797.7
7/22/2022	11.4	13.8	26.6	26.7	801.6	804.6	7.0	7.1	0.0	0.0	788.3	791.7
7/23/2022	11.4	13.0	26.5	26.7	797.9	802.2	7.0	7.0	0.0	0.0	785.5	789.6
7/24/2022	11.0	12.8	26.5	26.6	794.8	798.5	7.0	7.0	0.0	0.0	782.5	786.4
7/25/2022	8.7	473.6	26.5	26.6	785.8	954.1	4.5	7.1	0.0	23.4	476.7	785.8
7/26/2022	110.2	940.1	26.4	26.5	792.8	1414.5	4.8	7.1	0.0	70.8	279.7	682.8
7/27/2022	88.4	947.6	26.5	26.6	866.2	1435.3	3.6	8.1	0.0	53.9	315.2	818.9
7/28/2022	116.3	967.4	26.5	26.7	909.6	1467.4	5.7	7.4	0.0	72.8	375.5	846.1
7/29/2022	140.6	963.0	26.5	26.7	931.8	1432.9	4.4	7.2	0.0	62.3	376.5	831.2
7/30/2022	124.3	462.7	26.5	26.6	841.3	1138.8	6.3	6.9	0.0	0.0	676.1	814.8
7/31/2022	117.8	124.6	26.5	26.6	816.9	841.9	6.3	6.8	0.0	0.0	698.7	717.5

Circle Chart Index

Environmental Geo-Technologies, LLC 28470 Citrin Drive Romulus, MI 48174

Chart Recorder #1

Channel #1

Blue Pen - Well 1 Injection Pressure (chart value x 30)

Channel #2

Red Pen - Well 1 Annulus Pressure (chart value x 30)

Channel #3

Green Pen - Well 1 Flow Rate (chart value x 4)

Channel #4

Black Pen - Well 1 Annulus Tank Level (chart value x 0)

Chart Recorder #2

Channel #1

Blue Pen - Well 2 Injection Pressure (chart value x 30)

Channel #2

Red Pen - Well 2 Annulus Pressure (chart value x 30)

Channel #3

Green Pen - Well 2 Flow Rate (chart value x 4)

Channel #4

Black Pen - Well 2 Annulus Tank Level (chart value x 0)

Chart Recorder #3

Channel #1

Blue Pen - Injection pH Well 1 & 2 (chart value + 3.3)

Channel #2

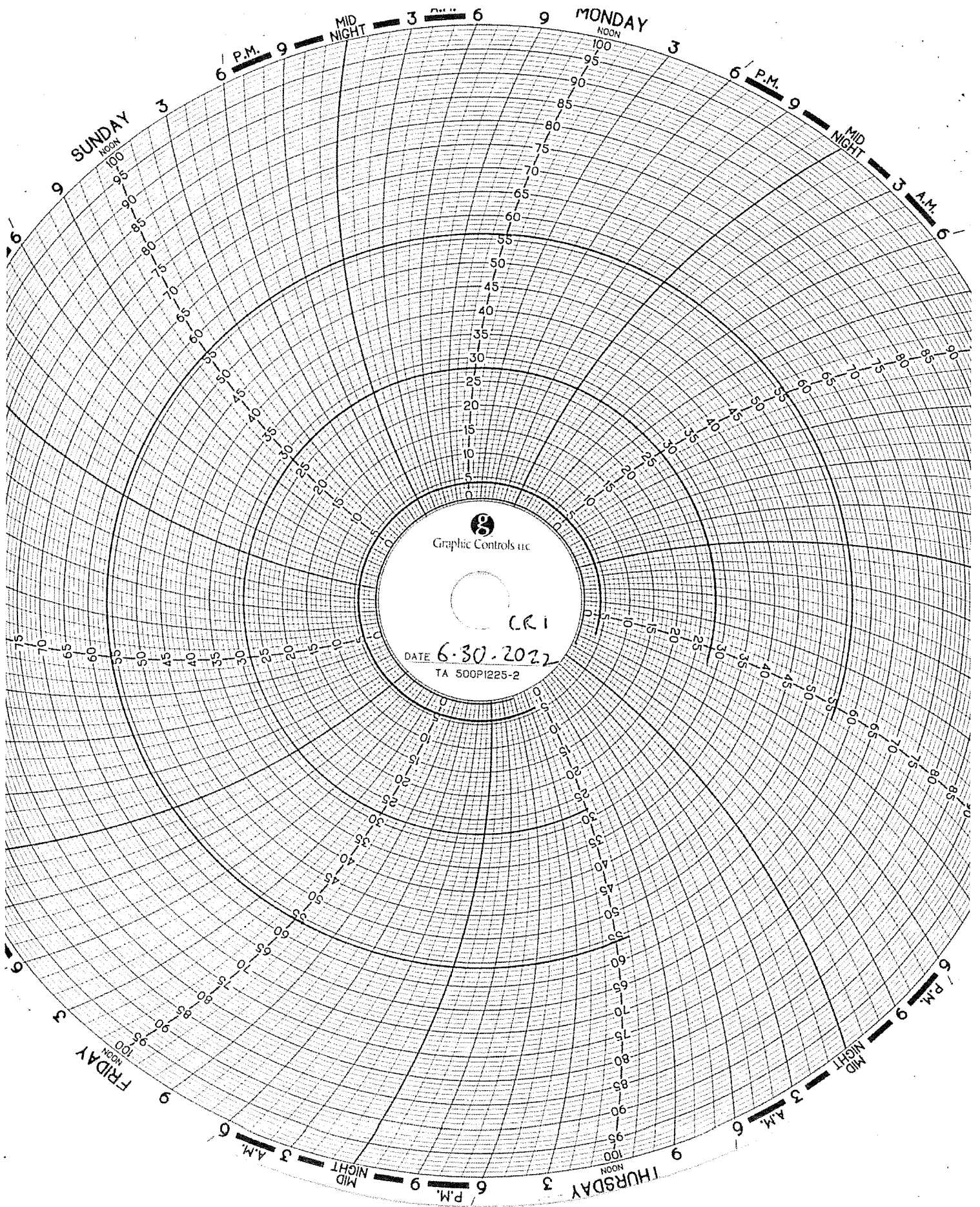
Red Pen - Well 1 Monthly Volume (chart value x 100,000)

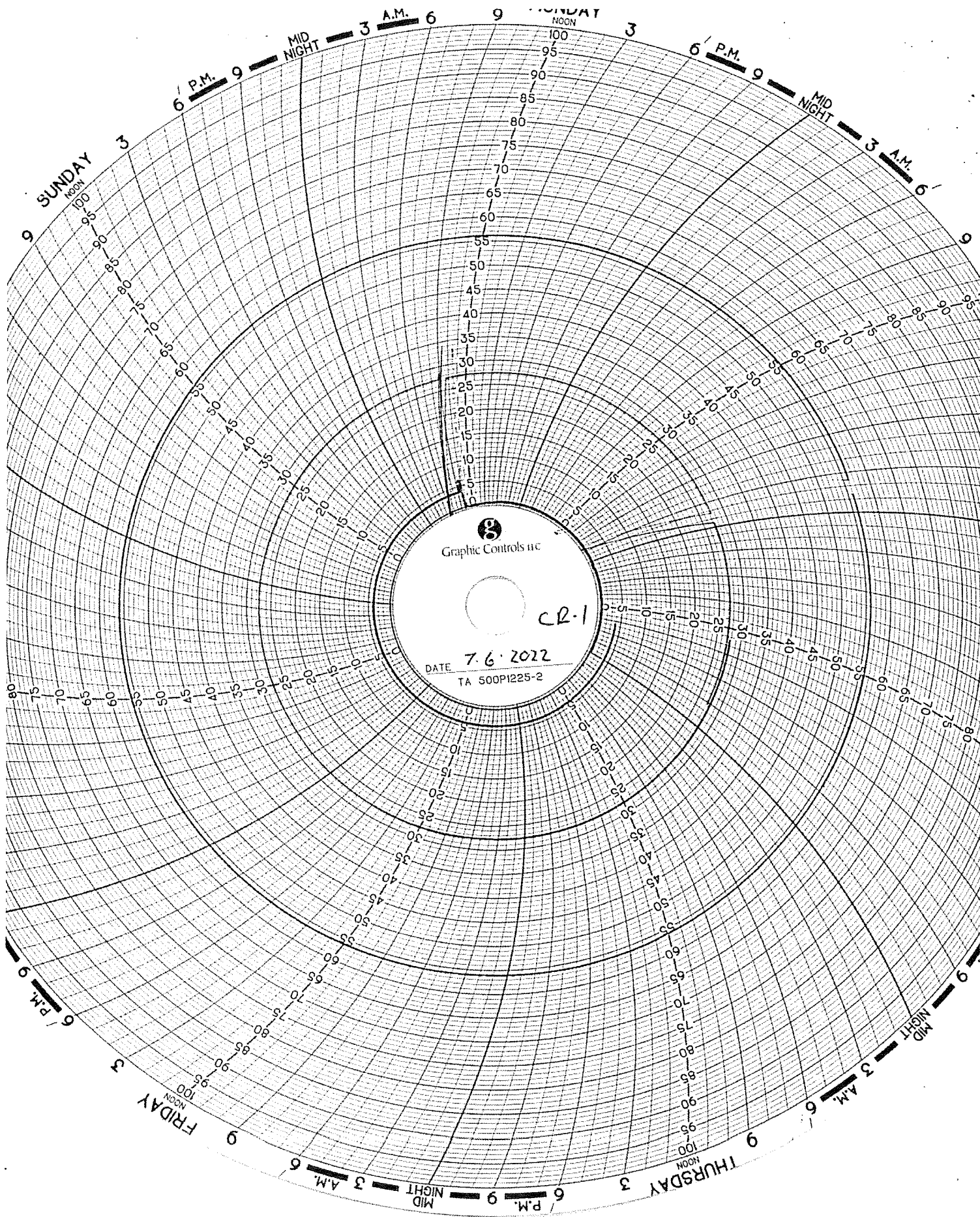
Channel #3

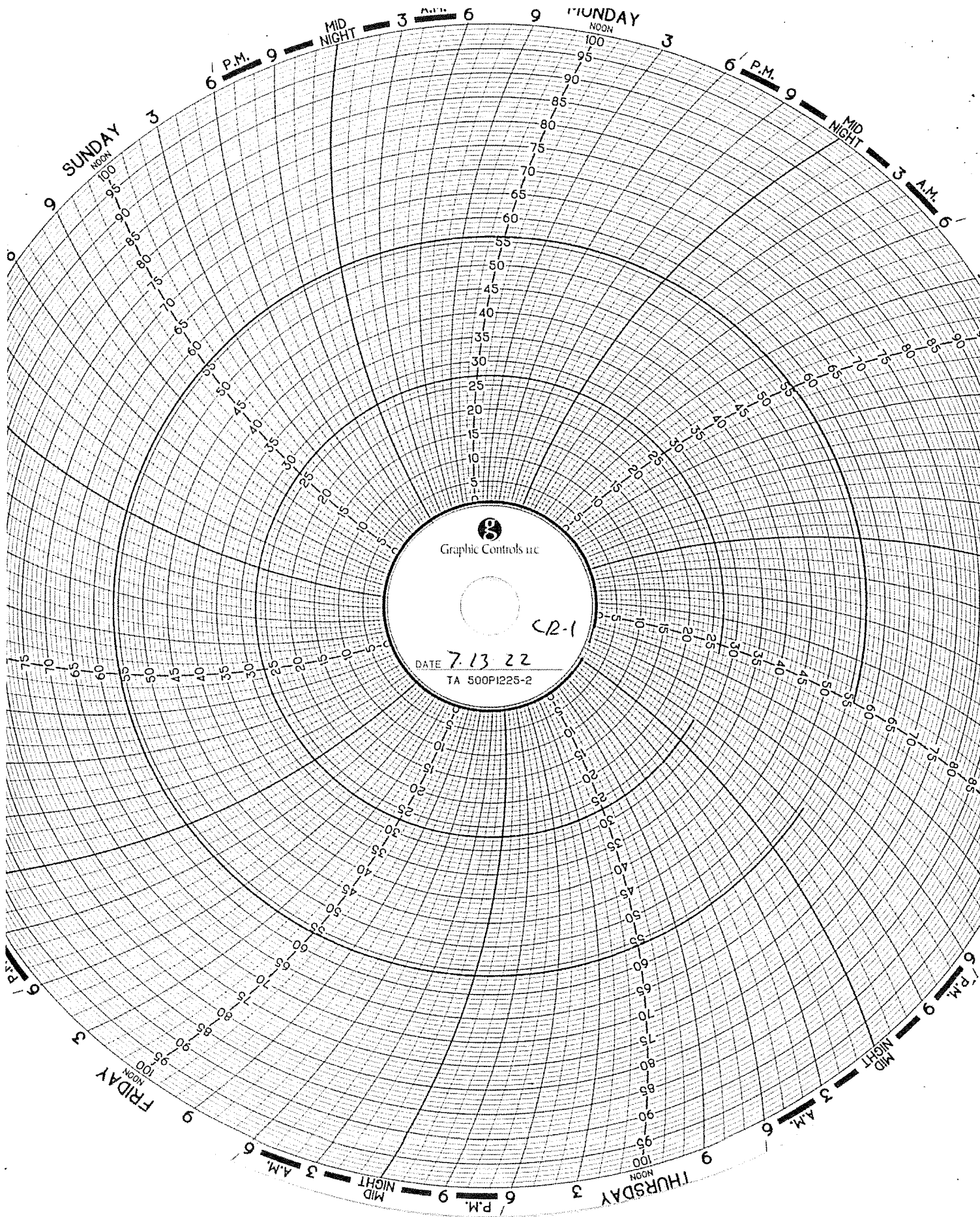
Green Pen - Well 2 Monthly Volume (chart value x 100,000)

Channel #4

Black Pen - Temperature (chart value x 0)



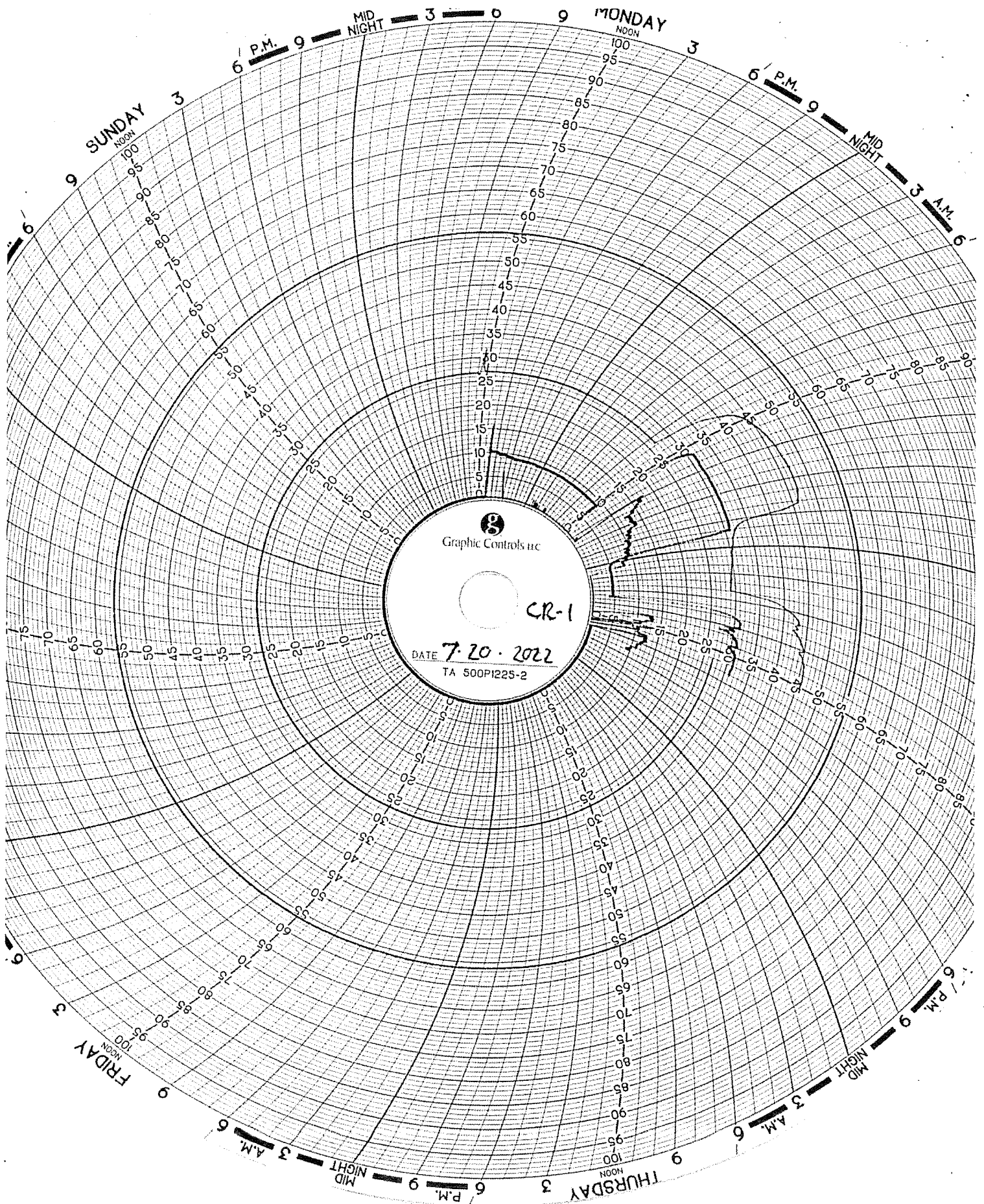


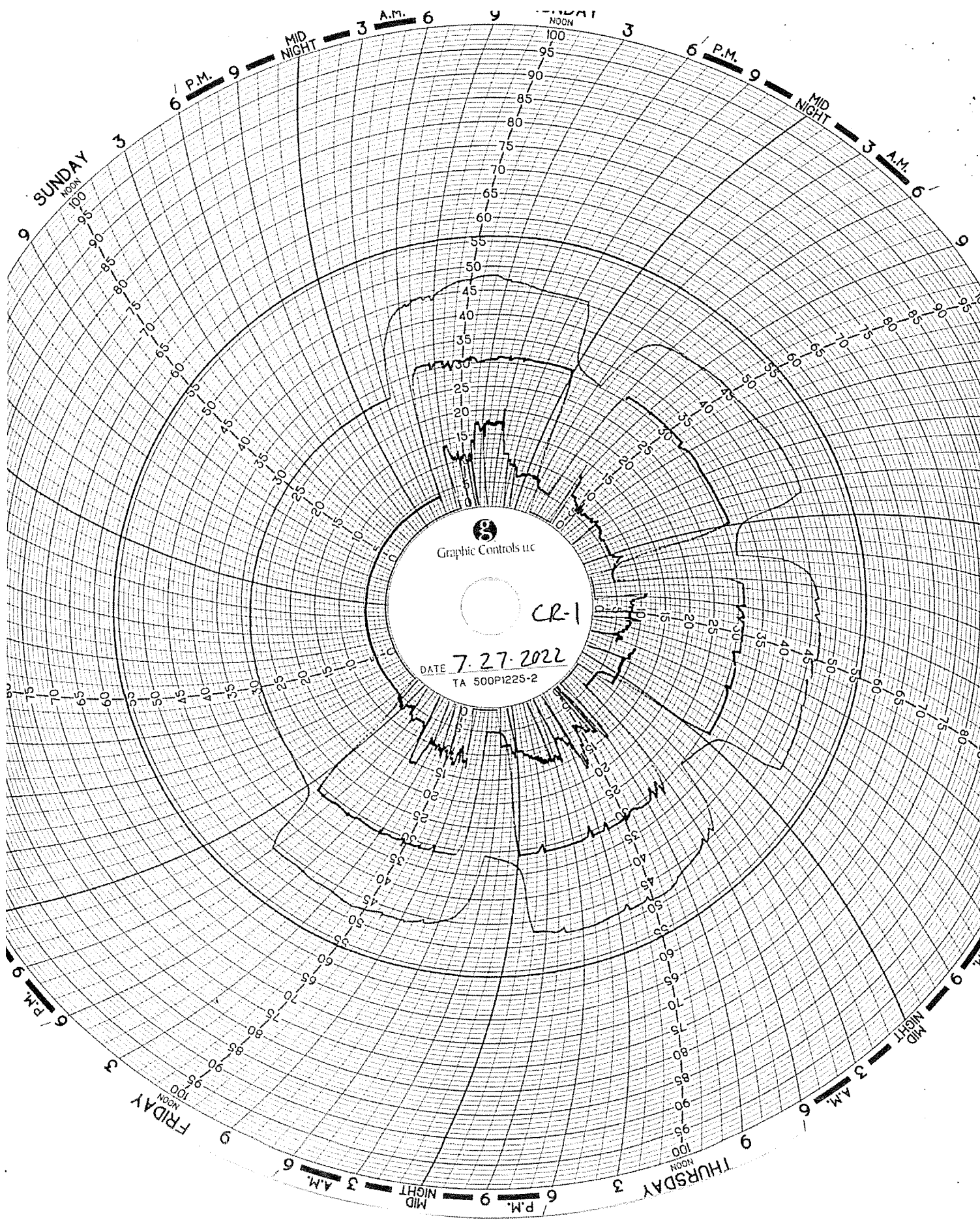


Graphic Controls LLC

CR-1

DATE 7.13.22
TA 500P1225-2





Graphic Controls inc

CR-1

DATE 7.27.2022
TA 500P1225-2

WELL 2 DATA

Comment on Well 2 Data

On 7-11-22, injection pressure gauges, annulus pressure gauges, and injection flow meter was calibrated by utilities instrumentation services. No waste injection occurred during the duration of the pressure gauge calibration. Extreme injection pressure, annulus pressure, and differential pressure values occurred during gauge calibration and are not reflective of actual injection parameters.



Injection Well 2, July 2022

	Injection Pressure (psig)		Annulus Tank Level (inch)		Annulus Pressure (psig)		Injection pH		Flow Rate (gpm)		Differential Pressure (psig)	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
7/1/2022	145.3	929.5	32.6	32.7	1023.8	1594.9	6.9	7.1	0.0	71.6	524.3	994.0
7/2/2022	135.5	931.6	32.5	32.7	993.2	1584.6	6.9	7.1	0.0	75.7	468.4	988.3
7/3/2022	119.5	135.8	32.5	32.6	950.3	1,001.0	6.9	6.9	0.0	0.0	830.5	865.5
7/4/2022	112.5	120.0	32.5	32.7	934.7	950.6	6.9	6.9	0.0	0.0	821.8	831.0
7/5/2022	108.1	112.9	32.6	32.7	926.1	935.2	6.9	6.9	0.0	0.0	817.5	822.7
7/6/2022	37.1	940.2	32.5	32.6	890.8	1,681.2	1.9	12.3	0.0	77.4	414.1	991.7
7/7/2022	87.5	940.2	32.5	32.7	1,046.9	1,576.8	2.4	7.4	0.0	76.3	520.9	1009.9
7/8/2022	118.4	940.2	32.6	32.7	1,036.6	1,551.9	4.7	7.0	0.0	68.3	517.0	953.7
7/9/2022	123.6	814.6	32.5	32.7	964.0	1,467.0	6.8	7.0	0.0	0.0	652.1	920.5
7/10/2022	113.2	124.1	32.5	32.6	937.3	964.1	6.6	7.0	0.0	0.0	823.4	840.6
7/11/2022	-1799.0	1019.8	32.5	32.6	-1,798.7	1,543.6	2.9	7.2	0.0	427.3	-2682.3	3051.9
7/12/2022	157.7	941.4	32.6	32.6	1,042.4	1,615.7	5.4	7.3	0.0	58.7	507.4	914.4
7/13/2022	150.5	940.1	32.5	32.6	1,052.6	1,598.7	5.3	7.5	0.0	54.7	535.2	918.5
7/14/2022	149.9	940.1	32.5	32.7	1,065.0	1,591.2	4.9	6.7	0.0	54.3	532.1	926.0
7/15/2022	129.4	940.1	32.6	32.7	1,065.7	1,597.6	6.1	7.5	0.0	54.2	559.1	955.2
7/16/2022	115.4	624.7	32.6	32.7	970.6	1,379.2	6.9	7.0	0.0	0.0	754.6	935.9
7/17/2022	103.3	116.0	32.5	32.6	940.5	970.9	7.0	7.0	0.0	0.0	836.7	855.5
7/18/2022	100.9	940.5	32.5	32.7	936.3	1,538.6	5.0	7.2	0.0	55.9	443.8	837.7
7/19/2022	125.5	940.4	32.6	32.8	1,022.8	1,592.1	4.8	7.2	0.0	48.9	517.4	919.1
7/20/2022	152.5	940.2	32.7	32.8	1,067.4	1,812.1	3.5	9.3	0.0	60.2	541.9	922.2
7/21/2022	137.2	940.2	32.7	32.8	1,113.4	1,635.0	2.8	7.4	0.0	52.2	602.2	1015.7
7/22/2022	164.9	940.1	32.6	32.8	1,082.3	1,554.9	6.9	7.4	0.0	50.5	546.0	930.4
7/23/2022	144.0	697.3	32.6	32.7	973.6	1,379.1	7.1	7.1	0.0	0.0	681.6	897.6
7/24/2022	133.5	144.8	32.6	32.6	945.8	973.9	7.0	7.1	0.0	0.0	811.2	830.0
7/25/2022	130.8	940.2	32.6	32.6	940.4	1588.0	1.1	12.8	0.0	71.4	349.6	812.6
7/26/2022	130.0	940.2	32.5	32.6	1,040.2	1555.2	4.8	8.6	0.0	59.0	536.1	930.7
7/27/2022	155.6	940.2	32.5	32.7	1,032.0	1561.1	1.2	7.2	0.0	65.0	430.1	906.3
7/28/2022	166.7	940.2	32.6	32.8	1,058.7	1577.6	6.8	7.1	0.0	60.5	528.9	933.9
7/29/2022	175.6	944.8	32.6	32.8	1,055.6	1557.0	7.0	7.1	0.0	56.4	519.7	911.9
7/30/2022	138.1	679.8	32.6	32.7	966.5	1367.3	7.0	7.1	0.0	0.0	687.9	897.7
7/31/2022	123.8	138.6	32.5	32.6	937.6	966.7	7.0	7.1	0.0	0.0	813.2	828.5

Circle Chart Index

Environmental Geo-Technologies, LLC 28470 Citrin Drive Romulus, MI 48174

Chart Recorder #1

Channel #1

Blue Pen - Well 1 Injection Pressure (chart value x 30)

Channel #2

Red Pen - Well 1 Annulus Pressure (chart value x 30)

Channel #3

Green Pen - Well 1 Flow Rate (chart value x 4)

Channel #4

Black Pen - Well 1 Annulus Tank Level (chart value x 0)

Chart Recorder #2

Channel #1

Blue Pen - Well 2 Injection Pressure (chart value x 30)

Channel #2

Red Pen - Well 2 Annulus Pressure (chart value x 30)

Channel #3

Green Pen - Well 2 Flow Rate (chart value x 4)

Channel #4

Black Pen - Well 2 Annulus Tank Level (chart value x 0)

Chart Recorder #3

Channel #1

Blue Pen - Injection pH Well 1 & 2 (chart value ÷ 3.3)

Channel #2

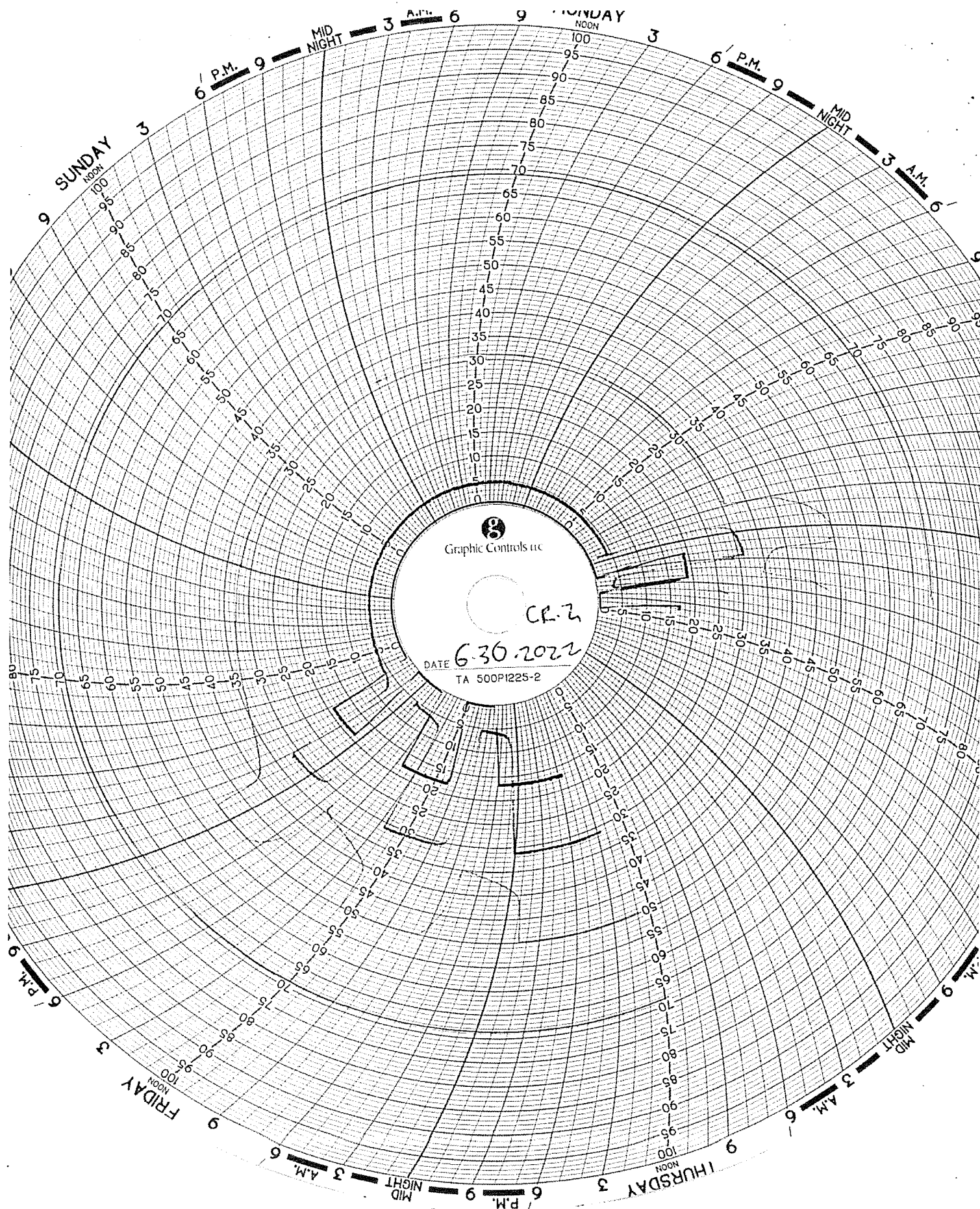
Red Pen - Well 1 Monthly Volume (chart value x 100,000)

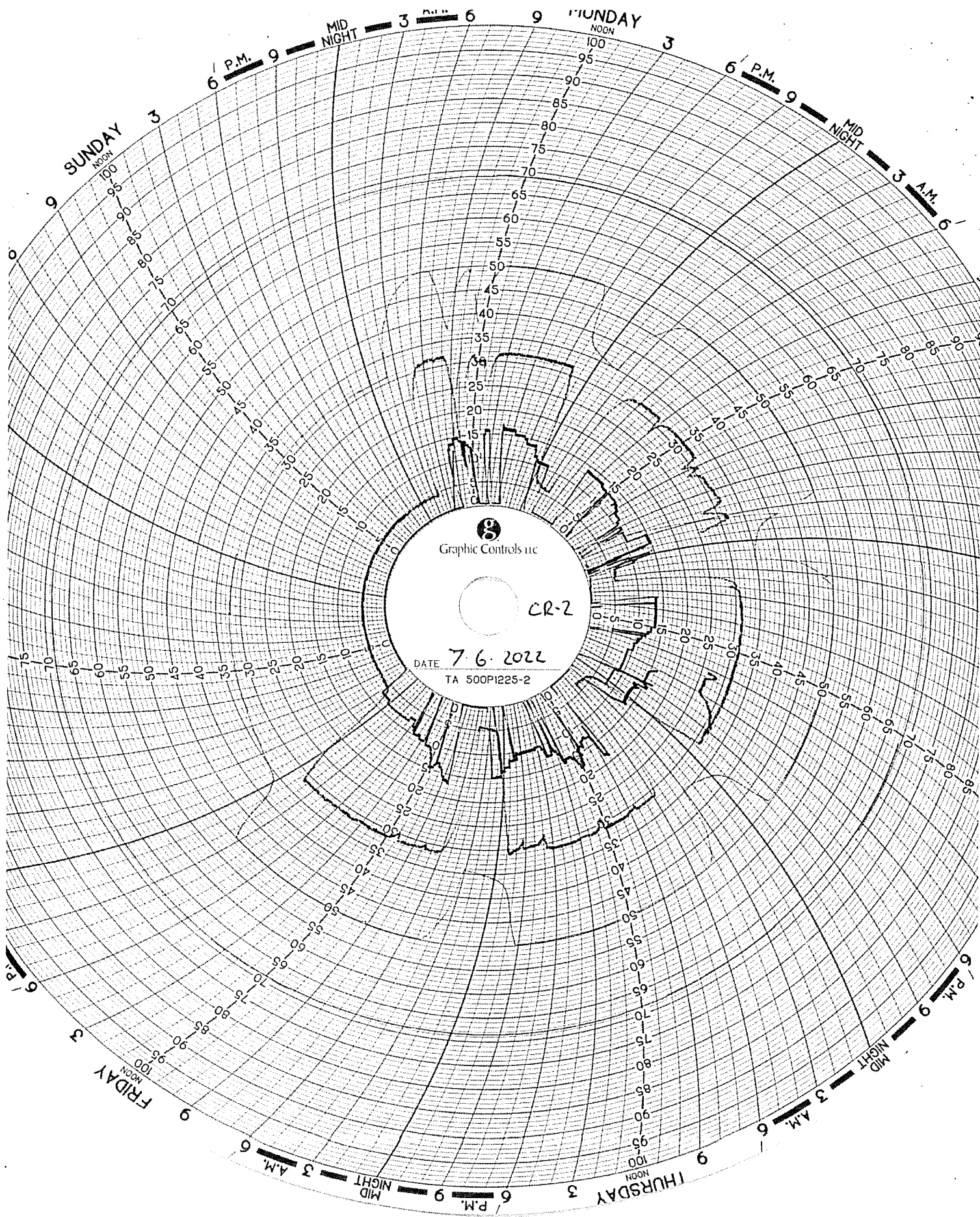
Channel #3

Green Pen - Well 2 Monthly Volume (chart value x 100,000)

Channel #4

Black Pen - Temperature (chart value x 0)

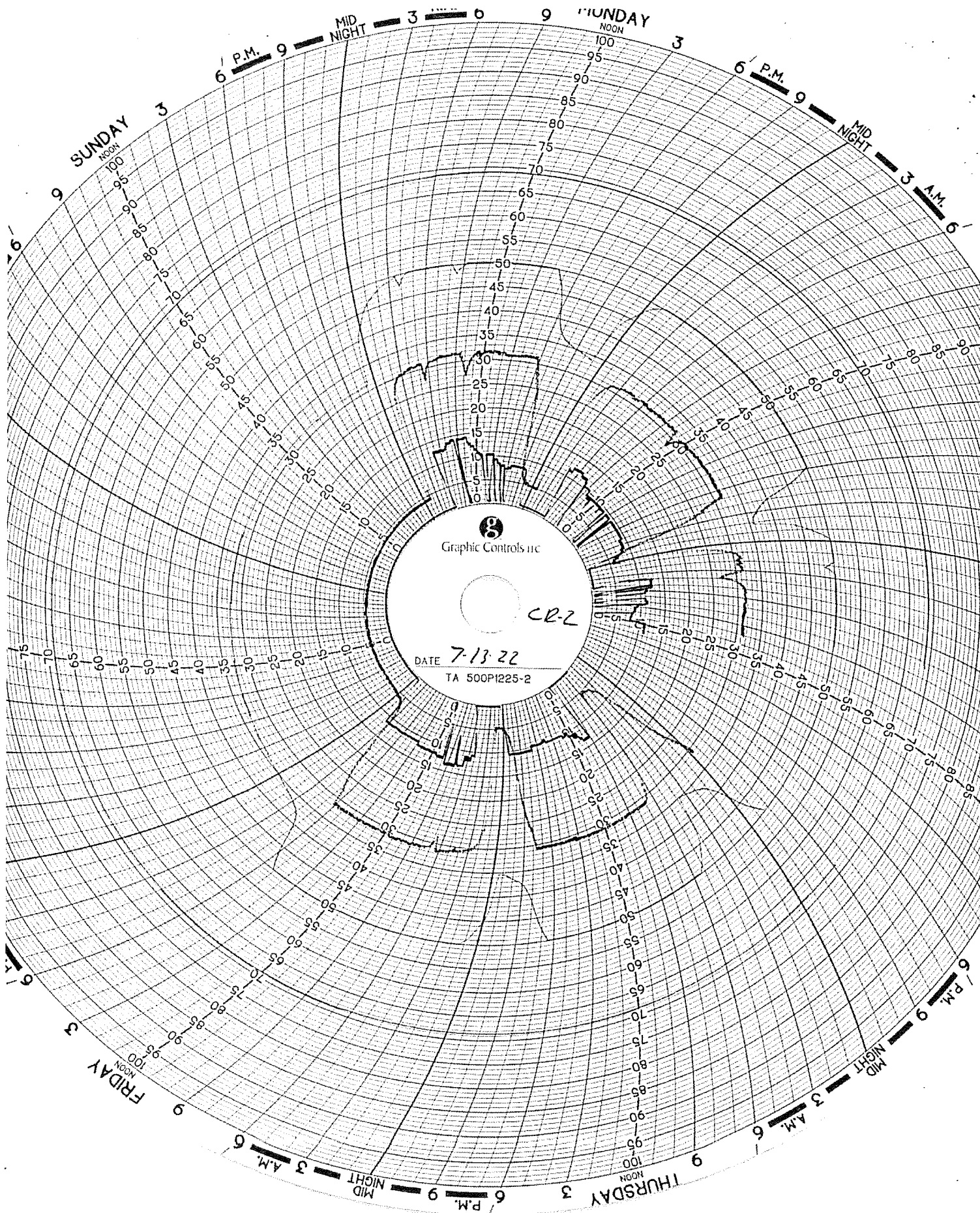


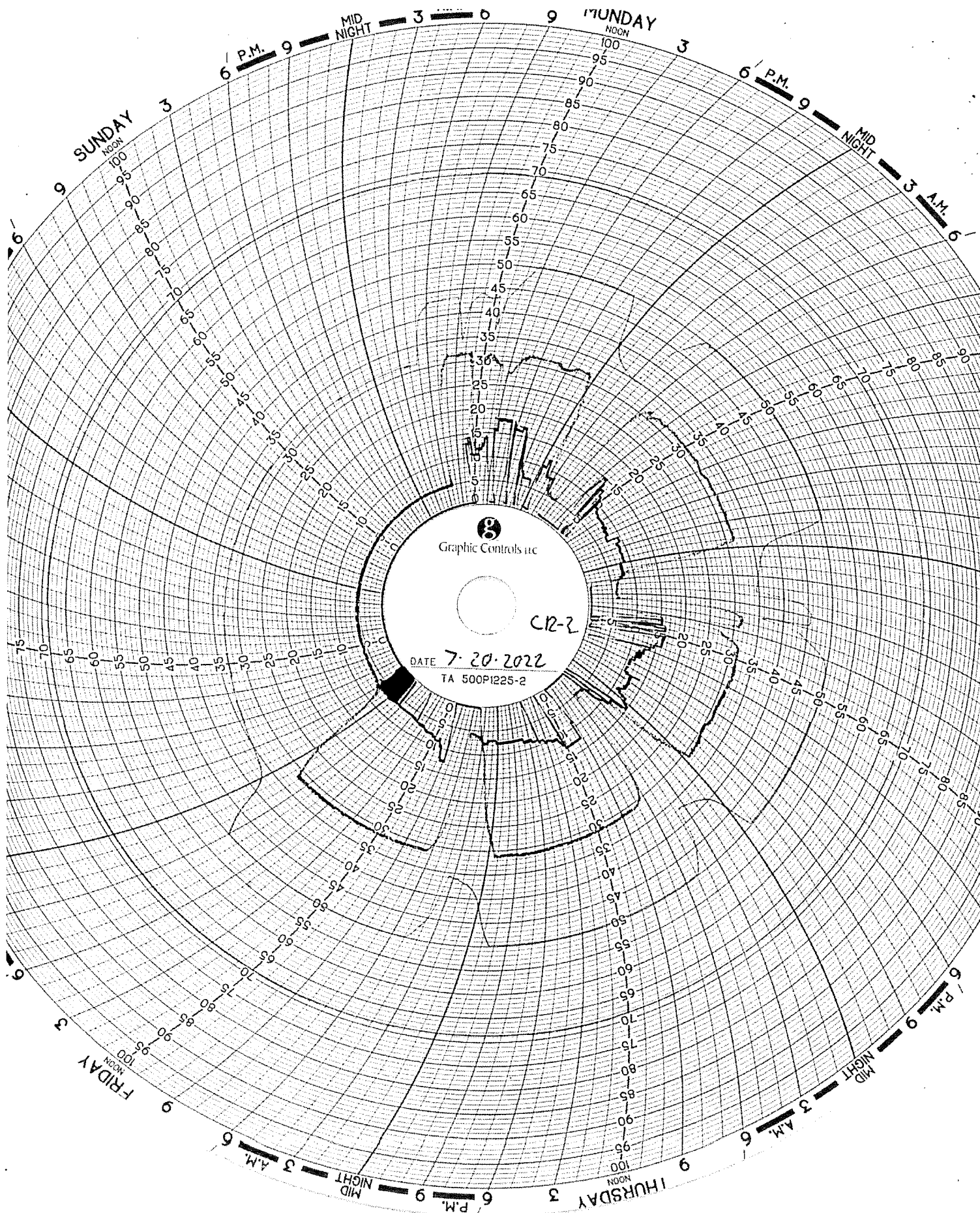


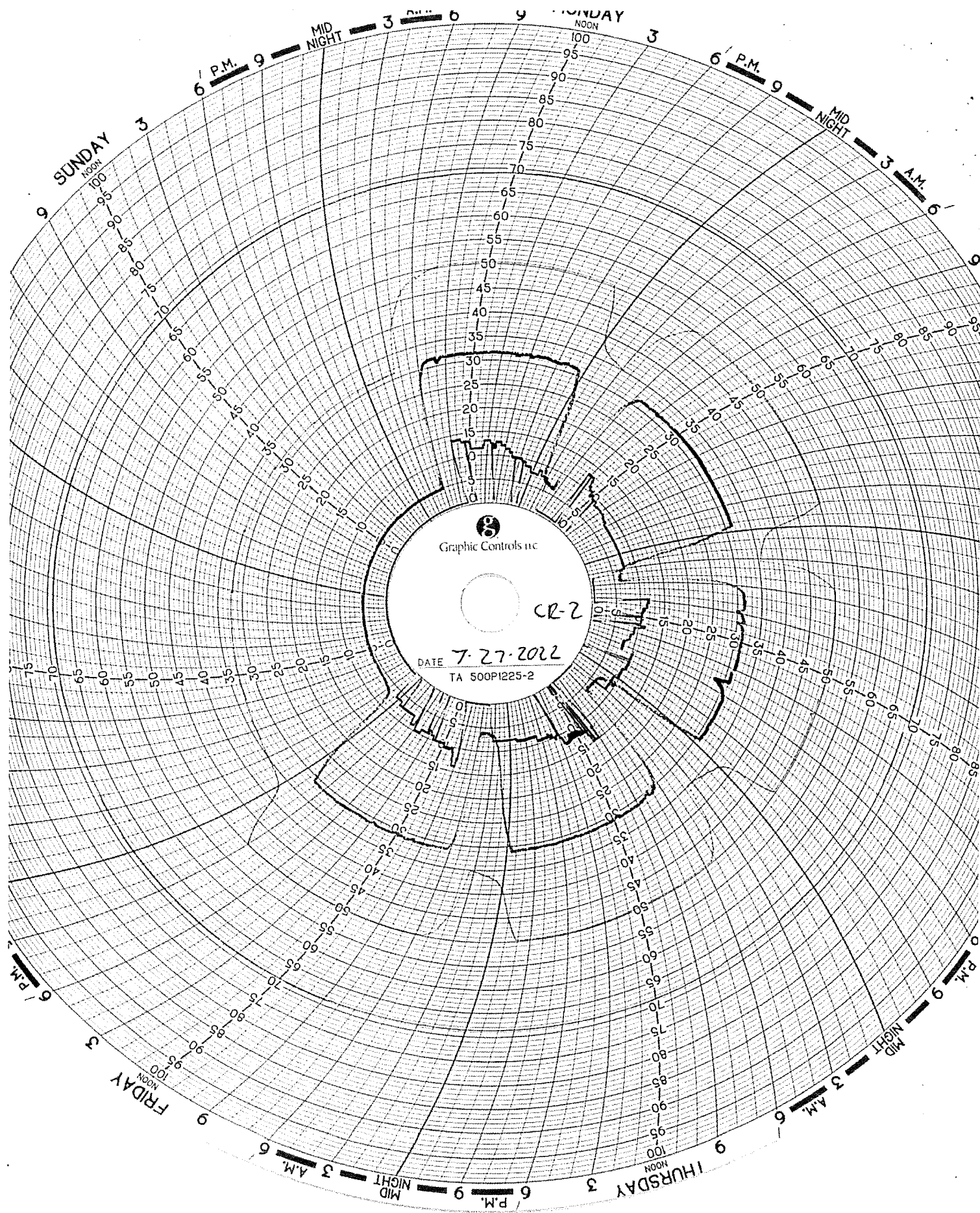
Graphic Controls LLC

CR-2

DATE 7-6-2022
TA 500P1225-2







Circle Chart Index

Environmental Geo-Technologies, LLC 28470 Citrin Drive Romulus, MI 48174

Chart Recorder #1

Channel #1

Blue Pen - Well 1 Injection Pressure (chart value x 30)

Channel #2

Red Pen - Well 1 Annulus Pressure (chart value x 30)

Channel #3

Green Pen - Well 1 Flow Rate (chart value x 4)

Channel #4

Black Pen - Well 1 Annulus Tank Level (chart value x 0)

Chart Recorder #2

Channel #1

Blue Pen - Well 2 Injection Pressure (chart value x 30)

Channel #2

Red Pen - Well 2 Annulus Pressure (chart value x 30)

Channel #3

Green Pen - Well 2 Flow Rate (chart value x 4)

Channel #4

Black Pen - Well 2 Annulus Tank Level (chart value x 0)

Chart Recorder #3

Channel #1

Blue Pen - Injection pH Well 1 & 2 (chart value ÷ 3.3)

Channel #2

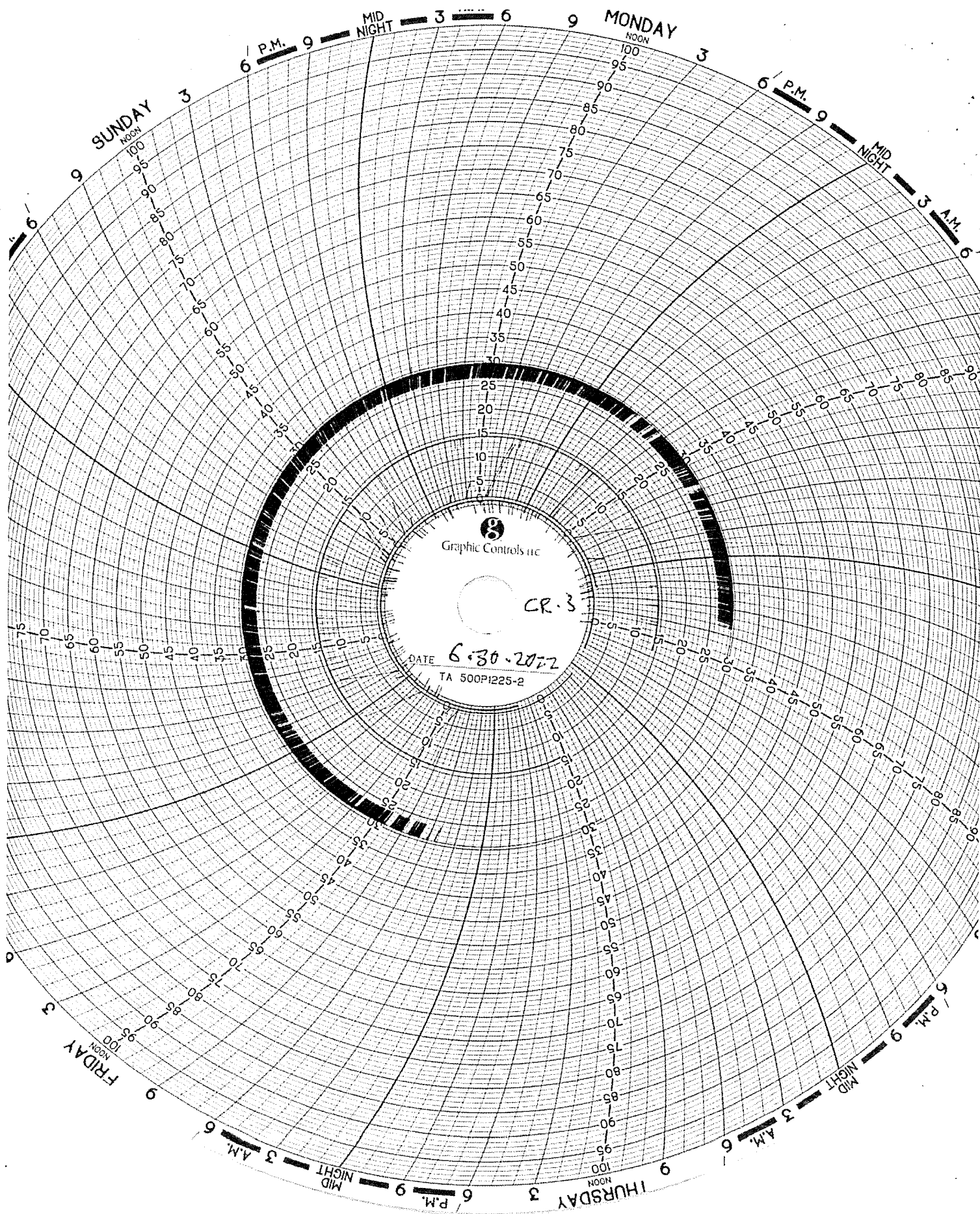
Red Pen - Well 1 Monthly Volume (chart value x 100,000)

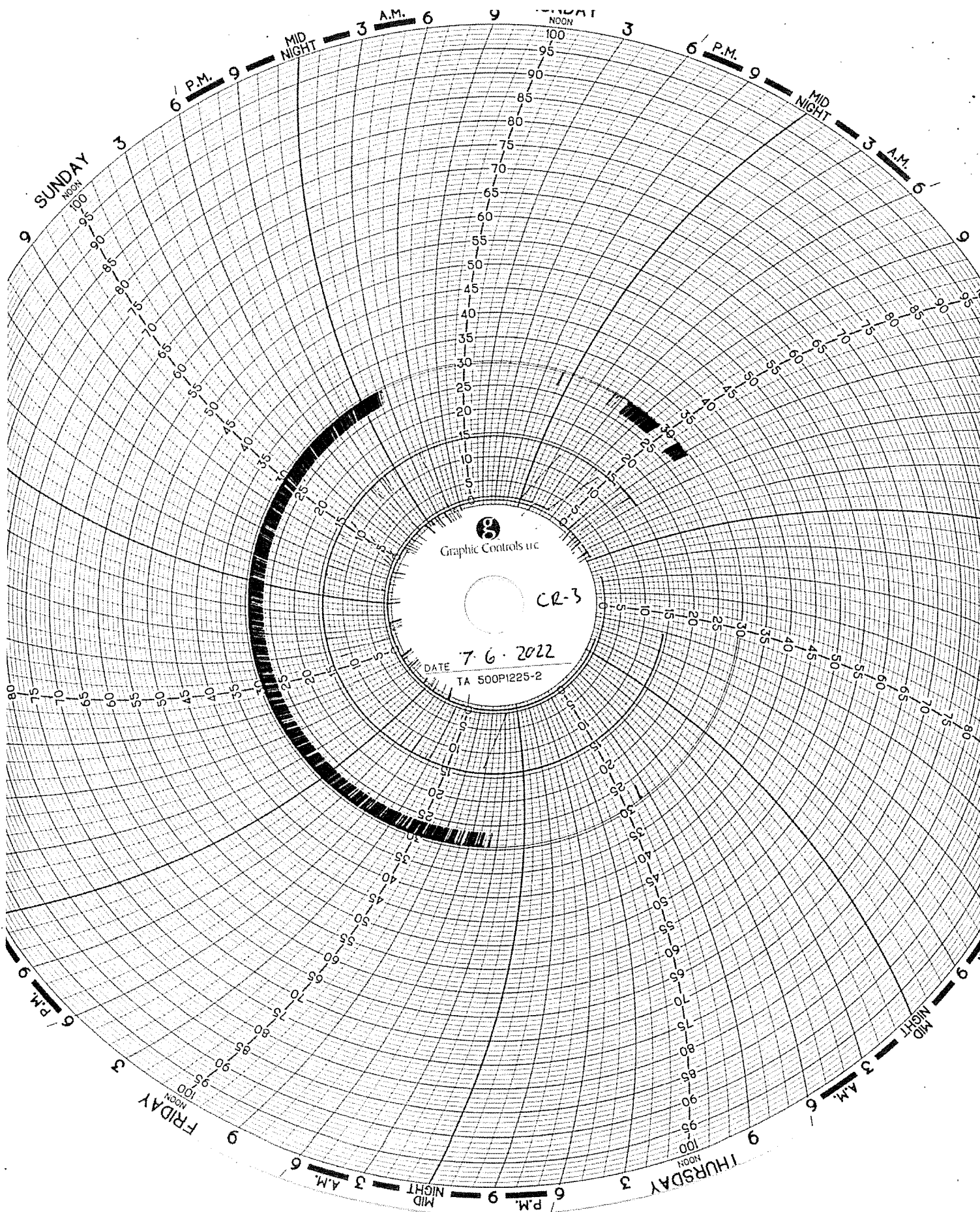
Channel #3

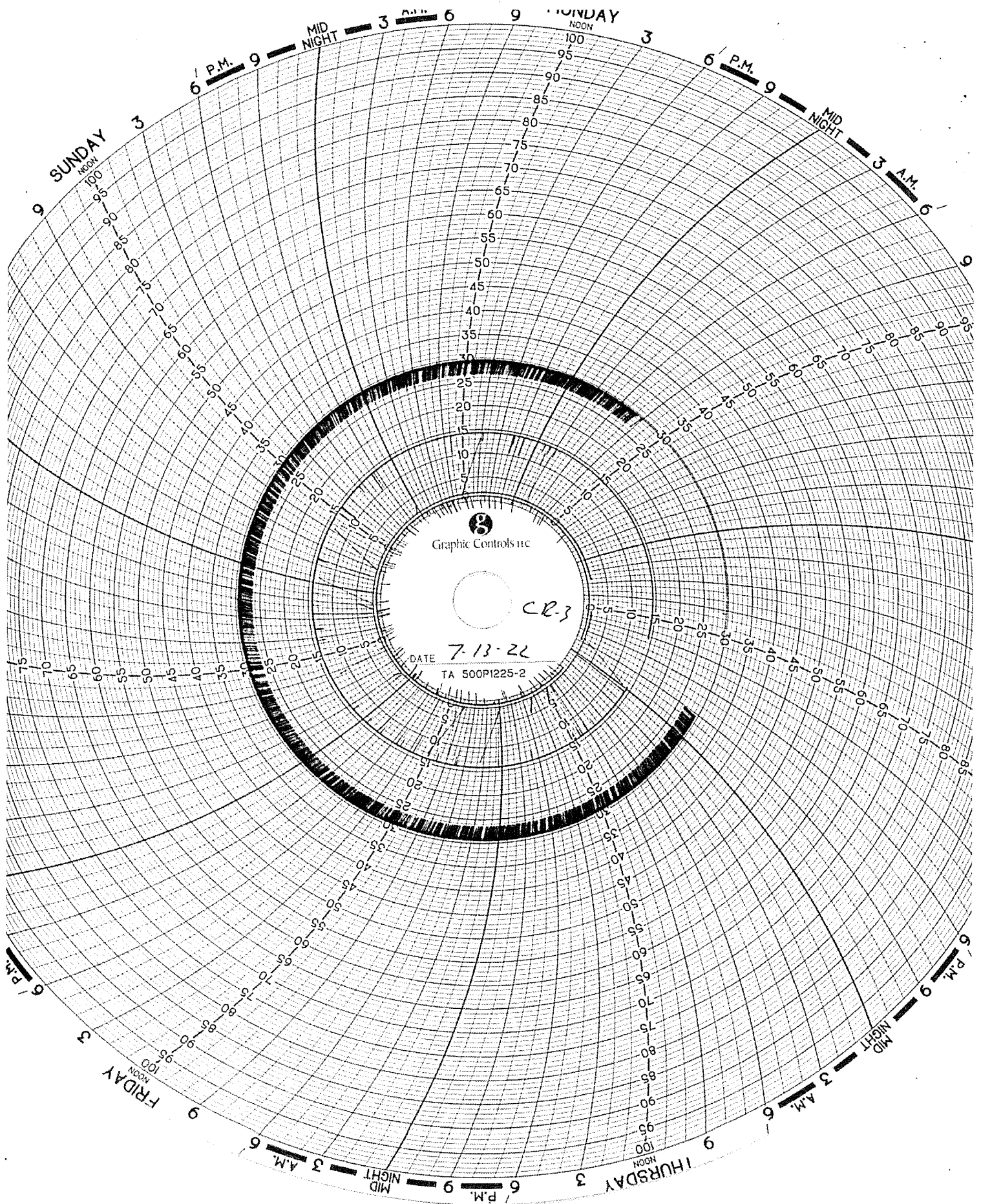
Green Pen - Well 2 Monthly Volume (chart value x 100,000)

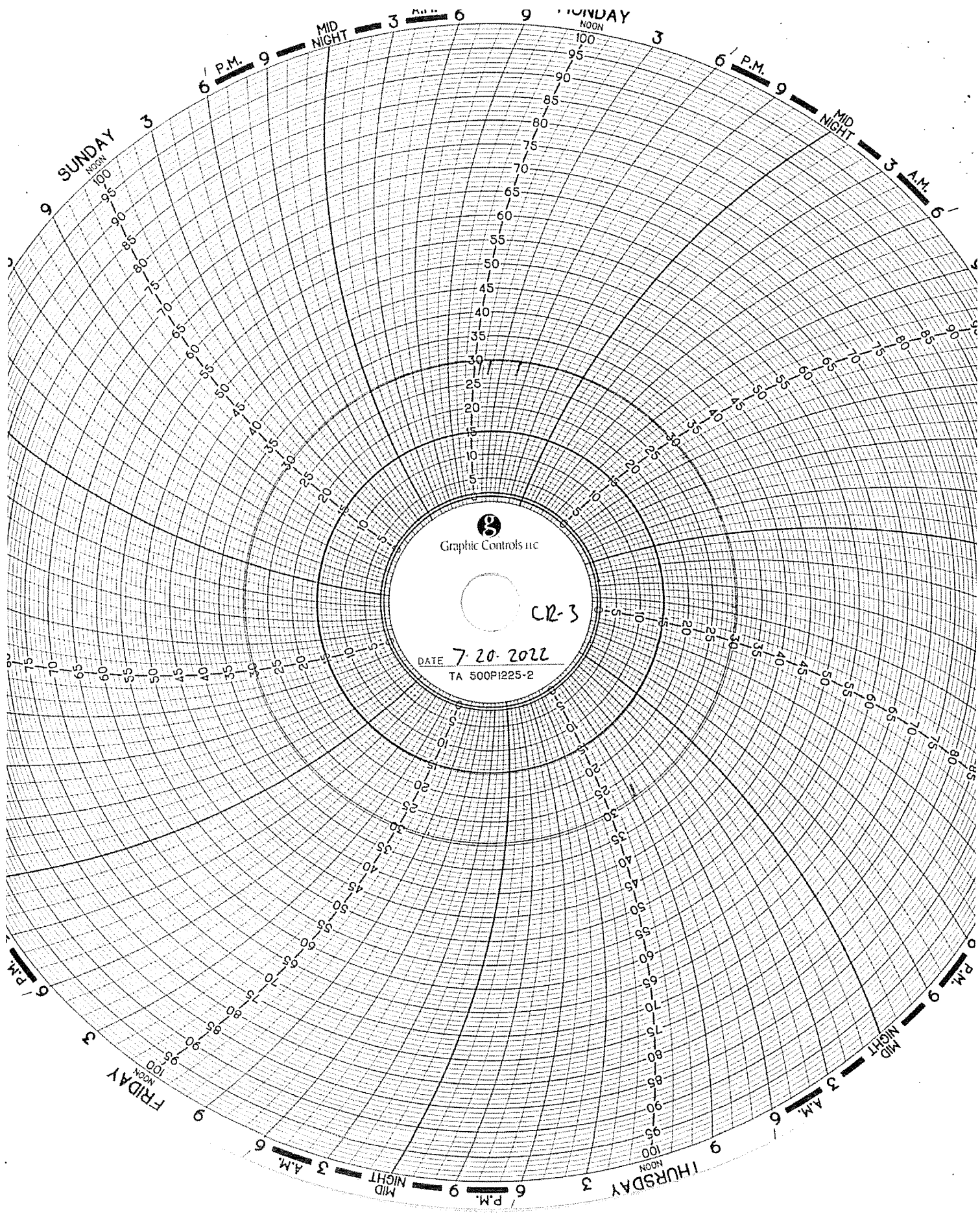
Channel #4

Black Pen - Temperature (chart value x 0)





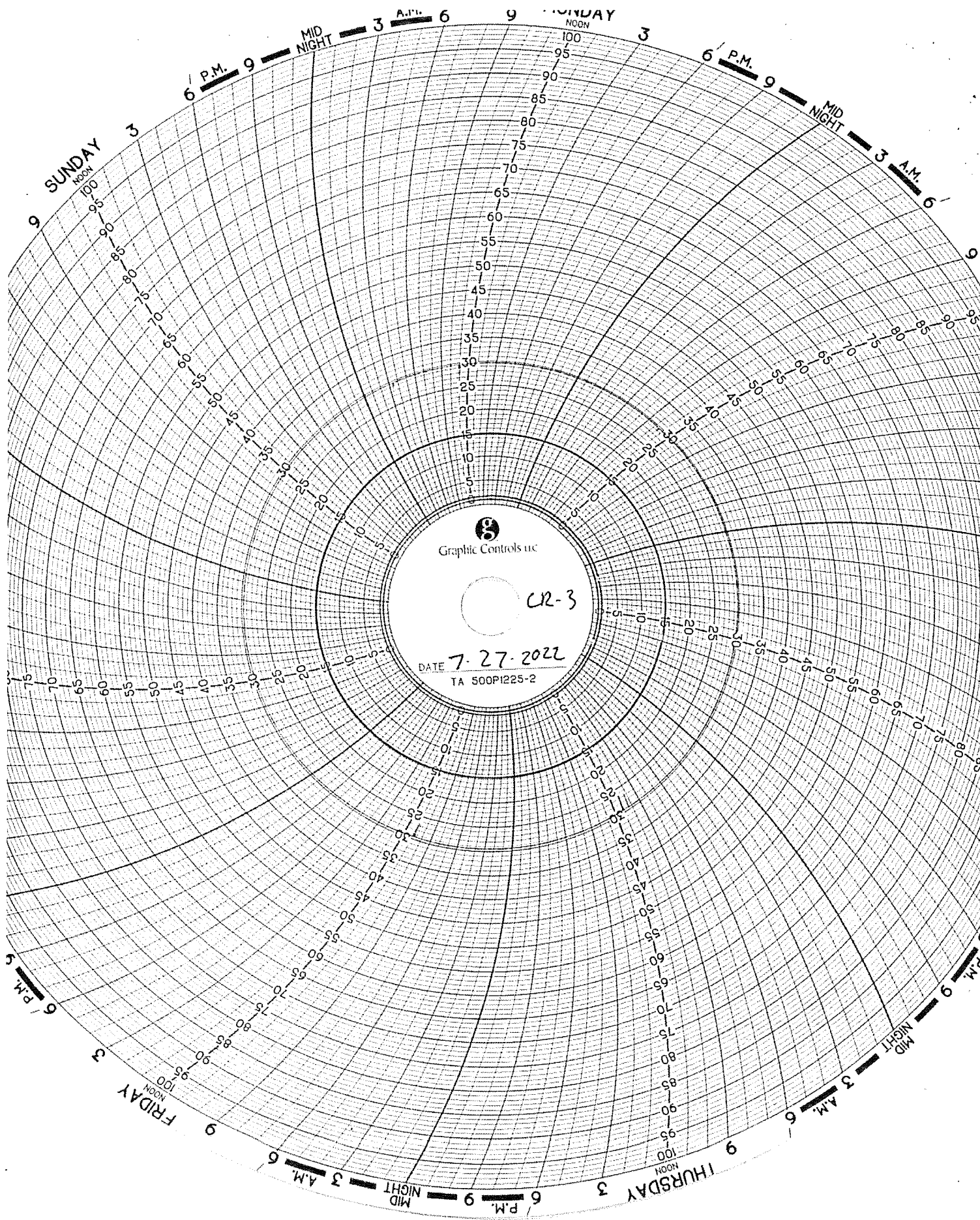




Graphic Controls LLC

CR-3

DATE 7-20-2022
TA 500PI225-2



Graphic Controls inc

C12-3

DATE 7-27-2022
TA 500P1225-2

CORROSION MONITORING

CORROSION MONITORING PLAN COUPON SUMMARY

Date	Hastelloy	Stainless Steel	Fiberglass	
	(C267)	(316L)	(Redbox)	
12/19/2013	13.330 g	10.848 g	7.309 g	Initial Mass @ start up
2/21/2014	13.329 g	10.846 g	7.306 g	
3/10/2014	13.327 g	10.845 g	7.300 g	
4/18/2014	13.324 g	10.841 g	7.272 g	
5/30/2014	13.328 g	10.818 g	7.226 g	
6/30/2014	13.321 g	10.337 g	7.196 g	
7/11/2014	13.323 g	10.304 g	7.196 g	
8/12/2014	13.328 g	10.045 g	7.182 g	
9/17/2014	13.321 g	9.997 g	7.090 g	
10/30/2014	13.321 g	9.387 g	7.075 g	
11/21/2014	13.320 g	9.386 g	7.069 g	New hastelloy coupon
12/19/2014	13.321 g	9.315 g	7.084 g	
1/12/2015	13.321 g	9.289 g	7.063 g	
2/23/2015	13.339 g	9.286 g	7.005 g	
3/31/2015	13.339 g	9.286 g	7.005 g	
4/27/2015	13.335 g	9.130 g	6.852 g	
5/21/2015	13.336 g	9.124 g	6.809 g	
6/12/2015	13.334 g	9.126 g	6.819 g	
7/27/2015	13.337 g	9.127 g	6.818 g	
8/26/2015	13.337 g	9.022 g	6.780 g	
9/21/2015	13.336 g	8.987 g	6.792 g	New stainless steel coupon
10/19/2015	13.335 g	8.985 g	6.797 g	
11/16/2015	13.334 g	8.982 g	6.788 g	
12/17/2015	13.334 g	8.933 g	6.791 g	
1/29/2016	13.334 g	8.931 g	6.788 g	
2/16/2016	13.332 g	8.799 g	6.757 g	
3/31/2016	13.339 g	9.286 g	7.005 g	
4/22/2016	13.333 g	8.590 g	6.744 g	
5/31/2015	13.334 g	6.084 g	6.784 g	
6/30/2016	13.328 g	10.942 g	6.793 g	
8/3/2016	13.326 g	10.529 g	6.743 g	New Fiberglass coupon
8/29/2016	13.325 g	10.020 g	6.723 g	
10/27/2016	13.325 g	8.765 g	6.708 g	
11/29/2016	13.327 g	8.571 g	6.740 g	
12/12/2016	13.323 g	8.223 g	6.717 g	
1/3/2017	13.325 g	8.059 g	6.712 g	
2/28/2017	13.324 g	7.634 g	6.727 g	
3/24/2017	13.325 g	7.370 g	6.732 g	
4/28/2017	13.325 g	6.736 g	6.736 g	
5/11/2017	13.323 g	7.352 g	6.689 g	
6/12/2017	13.323 g	7.357 g	6.689 g	New Fiberglass coupon
7/5/2017	13.323 g	7.355 g	6.689 g	
8/30/2017	13.324 g	7.353 g	18.105 g	
9/28/2017	13.325 g	7.352 g	18.060 g	
10/11/2017	13.324 g	7.350 g	18.038 g	
11/16/2017	13.325 g	7.363 g	18.047 g	
12/12/2017	13.326 g	7.308 g	18.307 g	

CORROSION MONITORING PLAN
COUPON SUMMARY

Date	Hastelloy	Stainless Steel	Fiberglass	
1/29/2018	13.326 g	10.930 g	18.027 g	New stainless steel coupon
2/9/2018	13.325 g	10.932 g	18.044 g	
3/19/2018	13.325 g	10.926 g	18.030 g	
4/16/2018	13.336 g	10.863 g	18.068 g	
5/17/2018	13.325 g	10.858 g	18.037 g	
6/20/2018	13.325 g	10.855 g	18.029 g	
7/12/2018	13.326 g	10.852 g	18.032 g	
8/21/2018	13.326 g	10.854 g	18.031 g	
9/14/2018	13.326 g	10.852 g	18.036 g	
10/10/2018	13.326 g	10.851 g	18.031 g	
11/20/2018	13.326 g	10.853 g	18.032 g	
12/11/2018	13.326 g	10.852 g	18.033 g	
1/14/2019	13.326 g	10.852 g	18.033 g	
2/20/2019	13.326 g	10.850 g	18.033 g	
3/15/2019	13.326 g	10.850 g	18.033 g	
4/10/2019	13.326 g	10.848 g	18.031 g	
5/17/2019	13.326 g	10.849 g	18.036 g	
6/5/2019	13.326 g	10.848 g	18.031 g	
7/8/2019	13.326 g	10.845 g	18.032 g	
8/12/2019	13.326 g	10.845 g	18.032 g	
9/8/2019	13.326 g	10.842 g	18.029 g	
10/17/2019	13.326 g	10.842 g	18.030 g	
11/20/2019	13.326 g	10.842 g	18.030 g	
12/11/2019	13.326 g	10.842 g	18.030 g	
1/16/2020	13.326 g	10.840 g	18.033 g	
2/6/2020	13.326 g	10.836 g	18.034 g	
3/3/2020	13.326 g	10.842 g	18.034 g	Well 1 workover new well
4/9/2020	13.328 g	10.839 g	18.037 g	
5/12/2020	13.322 g	10.830 g	18.035 g	
6/16/2020	13.316 g	10.771 g	18.009 g	
7/16/2020	13.308 g	10.560 g	17.843 g	
8/25/2020	13.310 g	10.214 g	17.773 g	
9/24/2020	13.289 g	9.796 g	17.656 g	
10/19/2020	13.282g	9.737g	17.621g	
11/5/2020	13.280g	9.728g	17.600g	
12/3/2020	13.281g	9.730g	17.689g	
2/10/2021	13.284g	9.728g	17.683g	
3/9/2021	13.290g	9.733g	17.585g	
4/13/2021	13.288g	9.730g	17.649g	
5/18/2021	13.282g	9.691g	17.543g	
6/17/2021	13.279g	9.639g	17.546g	
7/19/2021	13.278g	9.480g	17.507g	
8/3/2021	13.278g	9.437g	17.467g	
9/14/2021	13.277g	9.392g	17.467g	
10/11/2021	13.277g	9.359g	17.465g	
11/3/2021	13.277g	9.350g	17.273g	
12/15/2021	13.276g	9.351g	17.256g	
1/17/2022	13.276g	9.351g	17.256g	
2/15/2022	13.276g	9.347g	16.965g	
3/18/2022	13.281g	9.368g	17.246g	

CORROSION MONITORING PLAN
COUPON SUMMARY

4/18/2022	13.275	9.339	16.656
5/16/2022	13.298	9.328	16.600
6/15/2022	13.276	9.3	16.219
7/20/2022	13.303	9.324	16.393

Date: 07/20/2022
Material: C1563/316L
Weight: 9.324 g.



Date: 07/20/2022
Material: C276 5
Weight: 13.303 g.



Date: 07/20/2022
Material: Fiberglass
Weight: 16.393g.



CORROSION MONITORING COUPONS BASELINE VISUAL DESCRIPTION

November 4, 2013

Fiberglass

The fiberglass coupon is Red Box 2000 type and is 2-1/2 inches long by 1/2 inch wide and 1/4 inches thick. It is a dark orange (rust) in color with a glossy shine on one side a polished look on the opposite side and the cut edges look sanded.

Hastelloy

The hastelloy coupon is identified as C276 with serial number 1. The dimensions of the coupon are 3 inches long by 1/2 inch wide and 1/4 inch thick. The coupon is silver in color with a lightly sandblasted surface.

Stainless Steel

The stainless steel coupon is identified as 316L with serial number C1562. The dimensions of the coupon are 3 inches long by 1/2 inch wide and 1/4 inch thick. The coupon is silver in color with a lightly sandblasted surface.

October 22, 2015

• TEST REPORT •

PN 125322
PO 00154

PLASTICS TESTING DEPARTMENT

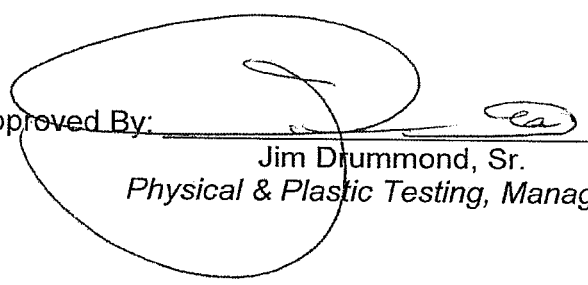
Prepared For:

John Frost
Environmental Geo-Technologies, LLC
28470 Citrin Drive
Romulus, MI 48174

Prepared By:


Melissa Martin
Sr. Project Technician

Approved By:


Jim Drummond, Sr.
Physical & Plastic Testing, Manager



An A2LA ISO 17025 Accredited Testing Laboratory — Certificate Numbers 255.01 & 255.02
ISO 9001:2008 Registered

ISO 9001:2008
Registered

A Testing Lab
*Certificate Numbers 255.01 & 255.02

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October 22, 2015

John Frost
Environmental Geo-Technologies, LLC

Page 2 of 2
PN 125322

SUBJECT: Barcol Hardness on one material.

RECEIVED: One small section identified as; Fiberglass Coupon.

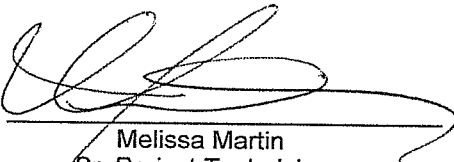
BARCOL HARDNESS ASTM D 2583-13a
Instant Reading

Results

Barcol Hardness, Instant

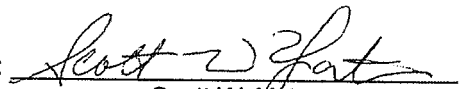
96

Prepared By:


Melissa Martin
Sr. Project Technician

tc

Approved By:


Scott W. Yates
Plastics Testing Assistant Manager



AKRON RUBBER DEVELOPMENT LABORATORY, INC.

Progress Through Innovation, Technology and Customer Satisfaction

December 12, 2016

TEST REPORT

PN 132662

PO

PLASTICS TESTING DEPARTMENT

Prepared For:

John Frost
Environmental Geo-Technologies, LLC
28470 Citrin Drive
Romulus, MI 48174

Prepared By:

Melissa Martin
Senior Project Technician

Rev 041916

Approved By:

Jim Drummond
Physical Testing, Manager



*Certificate Numbers 255.01 & 255.02

An A2LA ISO 17025 Accredited Testing Laboratory — Certificate Numbers 255.01 & 255.02
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Registered

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December 12, 2016

John Frost
Environmental Geo-Technologies, LLC

Page 2 of 2
PN 132662

SUBJECT: Barcol Hardness on one (1) material.


RECEIVED: One (1) small section identified as; Fiberglass Coupon.

BARCOL HARDNESS ASTM D 2583-13a
Instant Reading

RESULTS

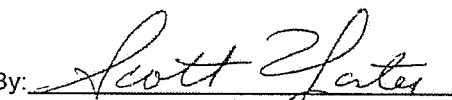
Barcol Hardness, Instant 96

Prepared By:


Melissa Martin
Senior Project Technician

wk

Approved By:


Scott Yates
Plastics Testing, Assistant Manager

ARDL is ISO 17025 accredited by A2LA for the test methods listed on the certificates referenced on page one. NOTE: Non-ISO 17025 accredited test methods are designated with the ^ symbol to differentiate from ISO 17025 accredited methods in the body of the test report.



Progress Through Innovation, Technology and Customer Satisfaction

December 13, 2017

TEST REPORT

PN 139140

PO#

PLASTIC TESTING DEPARTMENT

Prepared For:

John Frost
Environmental Geo-Technologies, LLC
28470 Citrin Drive
Romulus, MI 48174

Prepared By:

Melissa Martin
Sr Project Technician

Approved By:

Jim Drummond
Rubber & Plastic Testing, Manager

Rev 041916



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Progress Through Innovation, Technology and Customer Satisfaction

December 13, 2017

John Frost
Environmental Geo-Technologies, LLC

Page 2 of 2
PN 139140

SUBJECT: Barcol Hardness on one material.

RECEIVED: One small section identified as; Fiberglass Coupon.

BARCOL HARDNESS ASTM D 2583-13a
Instant Reading

Results


Barcol Hardness, Instant

96

Prepared By: 

Melissa Martin
Sr Project Technician

sc

Approved By: 

Scott Yates
Plastics Testing, Assistant Manager

ARDL is ISO 17025 accredited by A2LA for the test methods listed on the certificates referenced on page one. NOTE: Non-ISO 17025 accredited test methods are designated with the ^ symbol to differentiate from ISO 17025 accredited methods in the body of the test report.

Ghesquiere Plastic Testing, Inc.

20450 HARPER AVENUE
HARPER WOODS, MI 48225
PHONE (313) 885-3535
FAX (313) 885-1771

Report Date: November 15, 2013

Test Date: October 15 - November 14, 2013

Report #1310-77651

Performed for:

Environmental Geo-Technologies
28470 Citrin Drive
Romulus, MI 48174

Attention: Mr. Don Anderson

WORK REQUESTED:

Perform Barcol Hardness test on sample submitted.

DESCRIPTION OF SAMPLE:

Sample submitted was identified as a fiberglass test coupon.

(P. O. #Credit Card).

WORK PERFORMED:

Test specimen was prepared as necessary and conditioned for a minimum of 24 hours at standard laboratory conditions prior to testing.

Barcol Hardness test was performed in accordance with the procedures of ASTM D2583-13. One specimen was tested.

RESULTS:

The following determination was made based upon the above test:

BARCOL HARDNESS

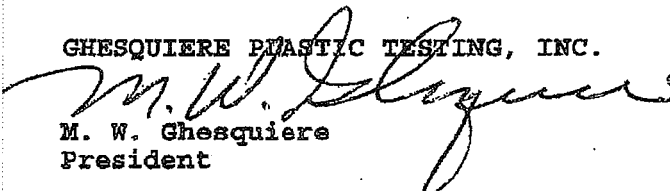
Hardness

Specimen 1

90

Specimen is being returned with this report for further evaluation.

Ghesquiere Plastic Testing, Inc.


M. W. Ghesquiere
President

MWG/kni

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TOTAL 1 PAGES

Ghesquiere Plastic Testing, Inc.

20450 HARPER AVENUE
HARPER WOODS, MI 48225
PHONE (313) 885-3535
FAX (313) 885-1771

Report Date: February 17, 2014
Test Date: February 14 - 17, 2014

Report #1402-78036
Performed for:
Environmental Geo-Technologies
28470 Citrin Drive
Romulus, MI 48174

Attention: Mr. Don Anderson

WORK REQUESTED:

Perform Barcol Hardness test on sample submitted.

DESCRIPTION OF SAMPLE:

Sample submitted was identified as a fiberglass test coupon.

(P. O. #Credit Card).

WORK PERFORMED:

Test specimen was prepared as necessary and conditioned for a minimum of 24 hours at standard laboratory conditions prior to testing.

Barcol Hardness test was performed in accordance with the procedures of ASTM D2583-13. One specimen was tested.

RESULTS:

The following determination was made based upon the above test:

BARCOL HARDNESS

Hardness

Specimen 1: 90

Specimen was returned to the client on February 17, 2014.

Ghesquiere Plastic Testing, Inc.

M. W. Ghesquiere
President

MWG/dm

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TOTAL 1 PAGES

Ghesquiere Plastic Testing, Inc.

20450 HARPER AVENUE
HARPER WOODS, MI 48225
PHONE (313) 885-3535
FAX (313) 885-1771

Report Date: June 16, 2014
Test Date: June 13 - 16, 2014

Report #1406-78499
Performed for:
Environmental Geo-Technologies, LLC
28470 Citrin Drive
Romulus, MI 48174

Attention: Mr. Don Anderson

WORK REQUESTED:

Perform Barcol Hardness test on sample submitted.

DESCRIPTION OF SAMPLE:

Sample submitted was identified as a fiberglass test coupon.
(P. O. #Credit Card).

WORK PERFORMED:

Test specimen was prepared as necessary and conditioned for a minimum of 24 hours at standard laboratory conditions prior to testing.

Barcol Hardness test was performed in accordance with the procedures of ASTM D2583-13. One specimen was tested.

RESULTS:

The following determination was made based upon the above test:

BARCOL HARDNESS

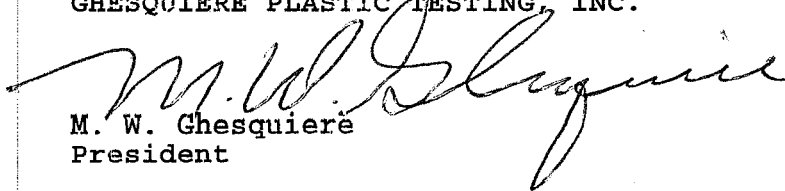
Specimen 1

Hardness

85

Specimen was returned to the client June 16, 2014.

Ghesquiere Plastic Testing, Inc.


M. W. Ghesquiere
President

MWG/dm

October 2, 2014

• TEST REPORT •

PN 118325


PO Attn: John Frost

PLASTICS TESTING DEPARTMENT


Prepared For:

John Frost
Environmental Geo-Technologies, LLC
28470 Citrin Drive
Romulus, MI 48174

Prepared By:


Melissa Martin
Sr. Project Technician

Approved By:


Jim Drummond
Physical & Plastics Testing, Manager



A Testing Lab

*Certificate Numbers 255.01 & 255.02

An A2LA ISO 17025 Accredited Testing Laboratory — Certificate Numbers 255.01 & 255.02
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ISO 9001:2008

Registered

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www.ardl.com

2887 Gilchrist Rd. | Akron, Ohio 44305 | answers@ardl.com
Toll Free (800) 830-ARDL | Worldwide (330) 794-6600 | Fax (330) 794-6610

Testing. Development. Problem Solving.

October 2, 2014

John Frost
Environmental Geo-Technologies, LLC

Page 2 of 2
PN118325

SUBJECT: Barcol Hardness on one material.
PO# Attn; John Frost

RECEIVED: One small section identified as; Fiberglass Coupon.


BARCOL HARDNESS ASTM D 2583-13a

Results

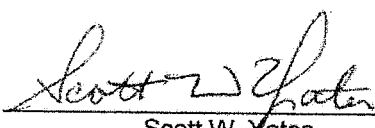
Barcol Hardness, Instant

97

Prepared By:


Melissa Martin
Sr. Project Technician

Approved By:


Scott W. Yates
Plastics Testing Assistant Manager

www.ardl.com

2887 Gilchrist Rd. | Akron, Ohio 44305 | answers@ardl.com
Toll Free (800) 830-ARDL | Worldwide (330) 794-6600 | Fax (330) 794-6610

BARCOL HARDNESS REPORT

Customer: Republic Industrial and Energy Solutions, LLC

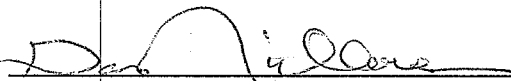
Component Tested: Test Coupon

PO Number: 9575553 Job Number: 3415

Calibration: Disc: 43 - 48 Actual Reading: 45

Barcol Readings	1	2	3	Average
Side One:	62	63	58	61
Side Two:	58	60	57	58
Overall Average:				60

Tested By:


(signature)

Gary Nicholson
(print or type name)

Date: 01/12/2021

BARCOL HARDNESS REPORT

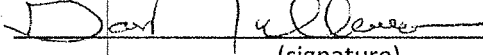
Customer: Republic Industrial and Energy Solutions, LLC

Component Tested: Test Coupon

PO Number: 10159792 Job Number: 3556

Calibration: Disc: 43 - 48 Actual Reading: 45

Barcol Readings	1	2	3	Average
Side One:	56	60	60	59
Side Two:	60	62	62	61
Overall Average:				60

Tested By: 
(signature)

Gary Nicholson
(print or type name)

Date: 10/11/2021

MAINTENANCE

UIC Monthly Maintenance Log

7/11/2022	Well 1 & 2	Primary and backup gauges for injection pressure and annulus pressure were calibrated for both #1-12 and #2-12
-----------	------------	--

INJECTION FINGERPRINTS

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7/1/22	
Receiving ID#	I07012201	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.H.	
Sampled by	J.H.	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	> 140	
pH (S.U.)	7.33	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	73	
Conductivity	33.8 mS	
% Solids	2.3%	
Turbidity	Yes	No
Color		
TSS (%)	< 0.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.H.	

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7-29-2022
Receiving ID#	107292206
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.T.
Sampled by	

LAB INFORMATION	
Compatible? (RT#)	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	
pH (S.U.)	7.00
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	73
Conductivity	35.2 ns
% Solids	3.26
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.T.

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7 / 28 / 22	
Receiving ID#	I07 28 2203 SST-1	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.N	
Sampled by	AV	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	7140	
pH (S.U.)	6.98	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	70	
Conductivity	35.9 mS	
% Solids	2.26	
Turbidity	Yes	No
Color		
TSS (%)	50.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.N	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7/28/22
Receiving ID#	207282203
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	AW

SST-2

LAB INFORMATION	
Compatible? (RT#)	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	6.87
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.03
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	70
Conductivity	90.3 μ S
% Solids	4.10
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7/29/22	
Receiving ID#	107292201 SST-1	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.H.	
Sampled by		

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	7140	
pH (S.U.)	5.98	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.03	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	70	
Conductivity	44.8 mS	
% Solids	4.24	
Turbidity	Yes	No
Color		
TSS (%)	<0.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.H.	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7/29/22
Receiving ID#	F07292201 SST-2
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	

LAB INFORMATION	
Compatible? (RT#)	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	7140
pH (S.U.)	7.00
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	70
Conductivity	58.9 mS
% Solids	2.31
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7 / 29 / 22
Receiving ID#	107292201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	
Sampled by	TL

55-1

LAB INFORMATION	
Compatible? (RT#)	Y
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 140
pH (S.U.)	6.76
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.01
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	76°
Conductivity	17.75
% Solids	.91
Turbidity	Yes No
Color	
TSS (%)	2.1
Radiation Screen (as needed)	
Lab Signature/Initials	TL

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7 / 29 / 22	
Receiving ID#	I07292201	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by		
Sampled by	TG	

SST-2

LAB INFORMATION		
Compatible? (RT#)	U	
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	7140	
pH (S.U.)	6.49	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.00	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	76	
Conductivity	34.5	
% Solids	.93	
Turbidity	Yes	No
Color		
TSS (%)	4.1	
Radiation Screen (as needed)		
Lab Signature/Initials	TG	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7 / 28 / 22	
Receiving ID#	I07282202 SST-2	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	JH	
Sampled by	JH	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	2140	
pH (S.U.)	7.01	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	73	
Conductivity	33.5 ms	
% Solids	1.59	
Turbidity	Yes	No
Color		
TSS (%)	40.1	
Radiation Screen (as needed)		
Lab Signature/Initials	JH	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	07/28/22	
Receiving ID#	207282208 I 072822-02 555-1	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.H.	
Sampled by	NE	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	2140	
pH (S.U.)	6.81	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.03	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	72	
Conductivity	41.0 mS	
% Solids	1.59	
Turbidity	Yes	No
Color		
TSS (%)	40.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.H.	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	07/27/22	
Receiving ID#	807272203	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	G.H.	
Sampled by	BB	

SST 1

LAB INFORMATION		
Compatible? (RT#)	4	
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	>140	
pH (S.U.)	6.38	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	72	
Conductivity	29.6 mS	
% Solids	1.52	
Turbidity	Yes	No
Color		
TSS (%)	<0.1	
Radiation Screen (as needed)		
Lab Signature/Initials	G.H.	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	07/27/22
Receiving ID#	20222203 SST 2
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.M.
Sampled by	BB

LAB INFORMATION	
Compatible? (RT#)	9
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	6.98
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	72
Conductivity	36.4 μ S
% Solids	1.49
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.M.

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7 / 27 / 22	
Receiving ID#	207272204	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.T.	
Sampled by	AN	

SS7-1

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	>140	
pH (S.U.)	6.93	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	72	
Conductivity	32-6 mS	
% Solids	2.10	
Turbidity	Yes	No
Color		
TSS (%)	2.8	
Radiation Screen (as needed)		
Lab Signature/Initials	S.H.	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7/27/22	
Receiving ID#	I07272204	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.T.	
Sampled by	AW	

SST-2

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	2140	
pH (S.U.)	6.94	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	72	
Conductivity	36.3 mS	
% Solids	1.68	
Turbidity	Yes	No
Color		
TSS (%)	10.1	
Radiation Screen (as needed)		
Lab Signature/Initials	S.T.	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

SST-1

RECEIVING INFORMATION		
Date	7-28-22	
Receiving ID#	I07282201	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by		
Sampled by	TG	

LAB INFORMATION		
Compatible? (RT#)	4	
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	7140	
pH (S.U.)	10.64	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.00	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	78	
Conductivity	32.4	
% Solids	1.60	
Turbidity	Yes	No
Color		
TSS (%)	2.1	
Radiation Screen (as needed)		
Lab Signature/Initials	TG	

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7-28-22
Receiving ID#	107242201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	
Sampled by	TL

SST-2

LAB INFORMATION	
Compatible? (RT#)	4
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 140
pH (S.U.)	6.95
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.01
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	80
Conductivity	36.2
% Solids	1.18
Turbidity	Yes No
Color	
TSS (%)	2.1
Radiation Screen (as needed)	
Lab Signature/Initials	TL

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

SST-2

RECEIVING INFORMATION	
Date	7-27-22
Receiving ID#	107272202
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	TG

LAB INFORMATION	
Compatible? (RT#)	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	2140
pH (S.U.)	7.33
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.01
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	78
Conductivity	28.5 mS
% Solids	1.46
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

SST-1

RECEIVING INFORMATION	
Date	7-27-22
Receiving ID#	107272202
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	TC

LAB INFORMATION	
Compatible? (RT#)	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	5140
pH (S.U.)	6.97
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	78
Conductivity	35.6
% Solids	1.39
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	07/26/22	
Receiving ID#	R07262203	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.H	
Sampled by	BH	

LAB INFORMATION		
Compatible? (RT#)	9	
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	2140	
pH (S.U.)	6.06	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	70	
Conductivity	352 mS	
% Solids	2.04	
Turbidity	Yes	No
Color		
TSS (%)	50.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.H	

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	07 / 26 / 22	
Receiving ID#	807262204	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.N	
Sampled by	BB	

LAB INFORMATION		
Compatible? (RT#)	Y	
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	> 140	
pH (S.U.)	6.34	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.01	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	70	
Conductivity	34.1 mS	
% Solids	2.07	
Turbidity	Yes	No
Color		
TSS (%)	1.01	
Radiation Screen (as needed)		
Lab Signature/Initials	J.N	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7-27-02
Receiving ID#	207272201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	
Sampled by	TG

SST-1

LAB INFORMATION	
Compatible? (RT#)	4
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	7140
pH (S.U.)	1.39
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.00
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	70
Conductivity	60.3
% Solids	.56
Turbidity	Yes No
Color	
TSS (%)	2.1
Radiation Screen (as needed)	
Lab Signature/Initials	TG

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7/26/22	
Receiving ID#	I07262202	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.H.	
Sampled by	TC	

SST-1

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)		
pH (S.U.)	4.65	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.01	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	76	
Conductivity	20.7 mS	
% Solids	0.96	
Turbidity	Yes	No
Color		
TSS (%)	J.H. 40.1 0.5	
Radiation Screen (as needed)		
Lab Signature/Initials	J.H.	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	07 / 25 / 22	
Receiving ID#	207252203	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.H.	
Sampled by	B.B.	

LAB INFORMATION		
Compatible? (RT#)	4	
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	> 140	
pH (S.U.)	4.58	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	71	
Conductivity	24.3 mS	
% Solids	2.65	
Turbidity	Yes	No
Color		
TSS (%)	< 0.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.H.	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7-26-22
Receiving ID#	107262201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	
Sampled by	TG

SST-1

LAB INFORMATION	
Compatible? (RT#)	Y
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	7146
pH (S.U.)	8.11
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	76
Conductivity	25.0
% Solids	1.87
Turbidity	Yes No
Color	
TSS (%)	4.1
Radiation Screen (as needed)	
Lab Signature/Initials	TG

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7/25/22	
Receiving ID#	I07252202	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	ST	
Sampled by	DB	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	2140	
pH (S.U.)	1.55	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.00	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	70	
Conductivity	33.3ms	
% Solids	<0.1	
Turbidity	Yes	No
Color		
TSS (%)	<0.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.T.	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	07/25 / 22	
Receiving ID#	I07252201	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.H.	
Sampled by	NE	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)		
pH (S.U.)	1.79	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.00	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	70	
Conductivity	20.9ms	
% Solids	20.1	
Turbidity	Yes	No
Color		
TSS (%)	20.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.H.	

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7 / 22 / 22	
Receiving ID#	I07222202	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.H.	
Sampled by	J.M.	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	>140	
pH (S.U.)	7.34	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.01	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	78	
Conductivity	16.40 mS	
% Solids	1.00	
Turbidity	Yes	No
Color		
TSS (%)	<0.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.M.	

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7/22/22	
Receiving ID#	E07222201	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	E.H.	
Sampled by	OB	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	2140	
pH (S.U.)	2.45	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	70	
Conductivity	1913 ms	
% Solids	1.89	
Turbidity	Yes	No
Color		
TSS (%)	40.1	
Radiation Screen (as needed)		
Lab Signature/Initials	JH	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7 / 21 / 22	
Receiving ID#	107212203	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	JH	
Sampled by	AW	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	2140	
pH (S.U.)	2.43	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	70	
Conductivity	193.8 μ S	
% Solids	1.59	
Turbidity	Yes	No
Color		
TSS (%)	< 0.1	
Radiation Screen (as needed)		
Lab Signature/Initials	JH	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7-21-22
Receiving ID#	107212202
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.F.
Sampled by	TG

LAB INFORMATION	
Compatible? (RT#)	4
PCBs (ppm) (Oily Waste Only)?	N/A
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 140
pH (S.U.)	6.67
Cyanides? (mg/L)	< 30
Sulfides? (ppm)?	< 200
Specific Gravity	1.00
Physical Description	Liquid
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	78
Conductivity	10.28
% Solids	0.20
Turbidity	Yes No
Color	Brown
TSS (%)	LOA
Radiation Screen (as needed)	N/A
Lab Signature/Initials	J.F.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7-20-22
Receiving ID#	I07202203
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	AW

LAB INFORMATION	
Compatible? (RT#)	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 140
pH (S.U.)	3.50
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.05
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	70
Conductivity	1.951
% Solids	4.42
Turbidity	Yes No
Color	
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7-21-22
Receiving ID#	107212201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	
Sampled by	TL

LAB INFORMATION	
Compatible? (RT#)	Y
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	7140
pH (S.U.)	2.43
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	
Conductivity	23.9
% Solids	1.68
Turbidity	Yes No
Color	
TSS (%)	2.1
Radiation Screen (as needed)	
Lab Signature/Initials	TL

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7-20-22
Receiving ID#	107202202
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	ST
Sampled by	TC

SST-1

LAB INFORMATION	
Compatible? (RT#)	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	
pH (S.U.)	7.73
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.03
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	72
Conductivity	32.0 mS
% Solids	1.58
Turbidity	Yes No
Color	
TSS (%)	1.0
Radiation Screen (as needed)	
Lab Signature/Initials	J.A.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7-19-22
Receiving ID#	107192203
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	AW

LAB INFORMATION	
Compatible? (RT#)	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 140
pH (S.U.)	6.98
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	70
Conductivity	32.6 nS
% Solids	1.22
Turbidity	Yes No
Color	
TSS (%)	1.0
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7-20-22
Receiving ID#	107202201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	
Sampled by	TG

SST-1

LAB INFORMATION	
Compatible? (RT#)	Y
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	7.15
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.01
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	80
Conductivity	33.2
% Solids	1.31
Turbidity	Yes No
Color	
TSS (%)	2.1
Radiation Screen (as needed)	
Lab Signature/Initials	TG

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	20220729	
Receiving ID#	T07192202	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.H.	
Sampled by	NE	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	2140	
pH (S.U.)	7.11	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	79	
Conductivity	29.5 mS	
% Solids	1.46	
Turbidity	Yes	No
Color		
TSS (%)	0.15	
Radiation Screen (as needed)		
Lab Signature/Initials	J.H.	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	5/18/22	
Receiving ID#	E02182203	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.A.	
Sampled by	BB	

LAB INFORMATION		
Compatible? (RT#)	Y	
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)		
pH (S.U.)	4.69	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	71	
Conductivity	23.8.5	
% Solids	8.27	
Turbidity	Yes	No
Color		
TSS (%)	5.0	
Radiation Screen (as needed)		
Lab Signature/Initials	J.A.	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7-19-22
Receiving ID#	207192261
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	
Sampled by	TG

SST-1

LAB INFORMATION	
Compatible? (RT#)	4
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 146
pH (S.U.)	4.59
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.01
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	80
Conductivity	28.7
% Solids	2.13
Turbidity	Yes No
Color	
TSS (%)	2.1
Radiation Screen (as needed)	
Lab Signature/Initials	TG

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7-15-2022	
Receiving ID#	207152203	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.A.	
Sampled by	AW	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	2140	
pH (S.U.)	2.67	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	70	
Conductivity	43.2 us	
% Solids	2.74	
Turbidity	Yes	No
Color		
TSS (%)	2.01	
Radiation Screen (as needed)		
Lab Signature/Initials	J.A.	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7-18-22	
Receiving ID#	107182202	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	JA	
Sampled by	T6	

SST-1

LAB INFORMATION		
Compatible? (RT#)	Yes	
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	>140	
pH (S.U.)	6.56	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.01	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	78	
Conductivity	26.3	
% Solids	1.49	
Turbidity	Yes	No
Color		
TSS (%)	2.1	
Radiation Screen (as needed)		
Lab Signature/Initials	T6/JA	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

SST-1

RECEIVING INFORMATION	
Date	7-18-22
Receiving ID#	107182201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	TG
Sampled by	TG

LAB INFORMATION	
Compatible? (RT#)	Yes
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	6.93
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	76
Conductivity	42.1 mS
% Solids	3.88
Turbidity	Yes No
Color	
TSS (%)	2.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H. T.G.

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7-15-22	
Receiving ID#	I0715 2202	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	JH	
Sampled by	WA	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	5240	
pH (S.U.)	7.71	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	73	
Conductivity	34.7 us	
% Solids	1.65	
Turbidity	Yes	No
Color		
TSS (%)	<0.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.H.	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	07/14-2022
Receiving ID#	207142203
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	5:11
Received by	
Sampled by	BH

LAB INFORMATION	
Compatible? (RT#)	✓
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	214
pH (S.U.)	6.15
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.03
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	70
Conductivity	38.4 mS
% Solids	1.07
Turbidity	Yes No
Color	
TSS (%)	10.1
Radiation Screen (as needed)	
Lab Signature/Initials	5.11

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7-15-22
Receiving ID#	107152201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	TL
Sampled by	TL

LAB INFORMATION	
Compatible? (RT#)	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	6.60 7.6 6.60
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	L.O.
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	80
Conductivity	45.0
% Solids	2.8
Turbidity	Yes No
Color	
TSS (%)	2.1
Radiation Screen (as needed)	
Lab Signature/Initials	TL

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7-14-22	
Receiving ID#	107142201	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.A.	
Sampled by	OB	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	7140	
pH (S.U.)	6.47	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	70	
Conductivity	33.0-5	
% Solids	1.93	
Turbidity	Yes	No
Color		
TSS (%)	<0.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.A.	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7-14-22
Receiving ID#	IO 714 Z202
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	EST-2
Client	
Transporter	
Time in	
Time out	
Received by	
Sampled by	NE

LAB INFORMATION	
Compatible? (RT#)	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	6.19
Cyanides? (mg/L)	0.30 < 30
Sulfides? (ppm)?	2.50 < 200
Specific Gravity	1.02
Physical Description	L.O.
Stream Consistency	Yes No
Oil in Sample?	Yes (No)
Temperature (F)	76
Conductivity	34.2
% Solids	2.30
Turbidity	Yes (No)
Color	Brown
TSS (%)	2.1
Radiation Screen (as needed)	NEG
Lab Signature/Initials	TG

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	07/13-2022
Receiving ID#	207132203
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.F.
Sampled by	BB

LAB INFORMATION	
Compatible? (RT#)	4
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	2140
pH (S.U.)	6.58
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	70
Conductivity	32.6 mS
% Solids	2.62
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.F.

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7-13-22
Receiving ID#	207132267
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.A
Sampled by	DM

LAB INFORMATION	
Compatible? (RT#)	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	2.35
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	73
Conductivity	34.2 ms
% Solids	1.81
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.A

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7-12-22
Receiving ID#	207122201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.T.
Sampled by	TU

LAB INFORMATION	
Compatible? (RT#)	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	2140
pH (S.U.)	6.29
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	73
Conductivity	18.39ms
% Solids	1.09
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.T.

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7.11.2022	
Receiving ID#	207112203	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.D.	
Sampled by		

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	5740	
pH (S.U.)	2.33	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.00	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	23	
Conductivity	6.66 mS	
% Solids	1.13	
Turbidity	Yes	No
Color		
TSS (%)	1.01	
Radiation Screen (as needed)		
Lab Signature/Initials	J.D.	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7-11-2022	
Receiving ID#	107112202	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.M.	
Sampled by	AW	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	>140	
pH (S.U.)	4.39	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	73	
Conductivity	27.5	
% Solids	2.25	
Turbidity	Yes	No
Color		
TSS (%)	40.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.M.	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7-13-22	
Receiving ID#	T07132201	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.M.	
Sampled by	TL	

ST-1

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	2140	
pH (S.U.)	5.30	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.03	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	73	
Conductivity	34.2 mS	
% Solids	2.88	
Turbidity	Yes	No
Color		
TSS (%)	<0.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.M.	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	07/12/2022
Receiving ID#	207122203
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.R.
Sampled by	B.B.

LAB INFORMATION	
Compatible? (RT#)	Y
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	2140
pH (S.U.)	7.89
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.03
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	73
Conductivity	38.8 μ S
% Solids	3.36
Turbidity	Yes No
Color	
TSS (%)	10.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.R.

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7-12-22
Receiving ID#	107122202
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J. J.
Sampled by	OS

LAB INFORMATION	
Compatible? (RT#)	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	2140
pH (S.U.)	6.76
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	72
Conductivity	22.9 mS
% Solids	1.02
Turbidity	Yes No
Color	
TSS (%)	5.9
Radiation Screen (as needed)	
Lab Signature/Initials	J. J.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7/8/22	
Receiving ID#	I0708222	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.H.	
Sampled by		

551-1

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	2140	
pH (S.U.)	4.85	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description	1-g.	
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	72	
Conductivity	24.2 μ S	
% Solids	2.73	
Turbidity	Yes	No
Color		
TSS (%)	< 0.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.H.	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	07/07/22
Receiving ID#	207072203
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	871
Sampled by	BB

LAB INFORMATION	
Compatible? (RT#)	✓
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 190
pH (S.U.)	5.27
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.03
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	73
Conductivity	32-9 μ S
% Solids	2.7%
Turbidity	Yes No
Color	
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J. D.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7/11/22	
Receiving ID#	107112201	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.A.	
Sampled by	TG	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)		
pH (S.U.)	7.14	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	72	
Conductivity	30.0 mS	
% Solids	1.59	
Turbidity	Yes	No
Color		
TSS (%)	<0.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.N.	

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7/8/22	
Receiving ID#	20708 22 03	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.H.	
Sampled by	AW	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	2140	
pH (S.U.)	6.59	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.01	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	22	
Conductivity	22.4 us	
% Solids	2.27	
Turbidity	Yes	No
Color		
TSS (%)	<0.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.H.	

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7/8/22	
Receiving ID#	107082201	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.T.	
Sampled by	J.T.	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	> 140	
pH (S.U.)	5.96	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	72	
Conductivity	20.1 mS	
% Solids	2.23	
Turbidity	Yes	No
Color		
TSS (%)	< 0.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.T.	

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	07/07/22	
Receiving ID#	207072204	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J. JT	
Sampled by	BH	

LAB INFORMATION		
Compatible? (RT#)	4	
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	2140	
pH (S.U.)	3.76	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.05	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	72	
Conductivity	42.8ms	
% Solids	6.86	
Turbidity	Yes	No
Color		
TSS (%)	<0.5	
Radiation Screen (as needed)		
Lab Signature/Initials	J. JT	

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7/7/22	
Receiving ID#	I07072202	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.T.	
Sampled by	B	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	140	
pH (S.U.)	6.58	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.03	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	70	
Conductivity	31.4 mS	
% Solids	6.05	
Turbidity	Yes	No
Color		
TSS (%)	0.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.T.	

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7/7/22	
Receiving ID#	107072201	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.A.	
Sampled by	TG	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	2140	
pH (S.U.)	6.84	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	73	
Conductivity	34.9 mS	
% Solids	2.8%	
Turbidity	Yes	No
Color		
TSS (%)	20.1	
Radiation Screen (as needed)		
Lab Signature/Initials		

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7/6/22	
Receiving ID#	207062204	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.T.	
Sampled by	AW	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?	G.T.	
TOC ppm (CC Waste Only)?		
Flash Point (F)	2140	
pH (S.U.)	7.16	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.04	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	73	
Conductivity	43.5 m	
% Solids	5.62	
Turbidity	Yes	No
Color		
TSS (%)	40.1	
Radiation Screen (as needed)		
Lab Signature/Initials	G.T.	

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7/6/22	
Receiving ID#	207062203	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.P.	
Sampled by	P.W.	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	> 140	
pH (S.U.)	5.42	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.10	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	73	
Conductivity	85.2 mS	
% Solids	14.35	
Turbidity	Yes	No
Color		
TSS (%)	< 0.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.P.	

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	8/6/22	
Receiving ID#	107062201	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	G.M.	
Sampled by	DM	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	7140	
pH (S.U.)	7.28	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	73	
Conductivity	34.2 ms	
% Solids	2.72	
Turbidity	Yes	No
Color		
TSS (%)	40.1	
Radiation Screen (as needed)		
Lab Signature/Initials	G.M.	

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	8/2/22	
Receiving ID#	F07022202	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.H.	
Sampled by	J.H.	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	2140	
pH (S.U.)	7.26	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	73	
Conductivity	34.5 mS	
% Solids	3.01	
Turbidity	Yes	No
Color		
TSS (%)	<0.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.H.	

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7/2/22	
Receiving ID#	I0702 2201	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J. N.	
Sampled by	J. N.	

LAB INFORMATION		
Compatible? (RT#)	Y	
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	214 D	
pH (S.U.)	7.28	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	73	
Conductivity	34.9 mS	
% Solids	0.52	
Turbidity	Yes	No
Color		
TSS (%)	20.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J. N.	

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION		
Date	7/1/22	
Receiving ID#	107012202	
Manifest #	Line	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.D.	
Sampled by	J.D.	

LAB INFORMATION		
Compatible? (RT#)		
PCBs (ppm) (Oily Waste Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	>140	
pH (S.U.)	7.28	
Cyanides? (mg/L)		
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	73	
Conductivity	34.8 ms	
% Solids	2.82	
Turbidity	Yes	No
Color		
TSS (%)	<0.1	
Radiation Screen (as needed)		
Lab Signature/Initials	J.D.	

WASTE PROFILES



Republic Services

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #
6440229260

Expiration Date
7/11/2023

I. Decision Request:

☒ Initial ☐ Recertification ☐ Change

Disposal Facility: 6440 - Detroit Ind Well

Generator Name: BESSINGER PICKLE CO

Generator Site Address: 537 N COURT STREET

City: AU GRES

County:

State: MI

Zip:

Name of Waste: VINGAR

Estimated Annual Volume: 3700 Gallons

II. Special Waste Department Decision:

☒ Approved ☐ Rejected

Management Method(s):

☐ Landfill

☐ Solidification

☐ Bioremediation

☒ Deep Well

☐ Transfer Facility

Problematic Special Waste according to Republic?

☐ Yes ☒ No

If yes, which one?

Approved by Special Waste Review Committee?

☐ Yes ☐ No ☒ Not Applicable

Precautions, Conditions or Limitations on Approval

The site must ensure that all pre-acceptance and verification analytical is performed in accordance with the site's permit requirements prior to acceptance and disposal of the profiled waste.

Special Waste Analyst Signature:

Name (Printed): Stephen Brown

Date: 7/11/2022

III. Facility Decision:

☒ Approved ☐ Rejected

Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee:

Name (Printed):

Ben Farris

Date: 7/11/2022

Republic Industrial and Energy Solutions, LLC

28470 Citrin Dr, Romulus, MI 48174. Telephone 734 946 1000. Fax 734 946 1002

GENERATOR WASTE PROFILEProfile # 6440229260**GENERATOR INFORMATION**

Name: Bessinger Pickle Co. USEPA ID # VSQG
Facility Address: 537 N Court Street SIC/NAICS Code: _____ State Code: _____
City: Au Gres State: MI Zip Code: 48703
Contact: Jack Bessinger Title: Owner Phone: (313) 538-6655 Fax: (313) _____

BILLING INFORMATION☐ SAME AS ABOVE

Company Name: ERG Environmental Services
Address: 13040 Merriman Rd, Suite 200
City: Livonia State: MI Zip Code: 48150
Attention: Accounts Payable Title: _____ Phone: (734) 437-9650 Fax: (734) 437-9651

WASTE INFORMATION

Name of Waste/Common Chemical Name: Vinegar

Process Generating Waste (Please be specific, incomplete information may delay the approval process):

~~Unused, obsolete vinegar (12% concentration).~~

USEPA / STATE WASTE IDENTIFICATION

1. This waste is considered to be: ☒ Non Hazardous Liquid Industrial Waste ☐ Hazardous Waste
2. Regulated by TSCA? ☐ Yes ☒ No (PCBs, etc.)
3. List ALL Applicable Waste Codes: NA

PHYSICAL CHARACTERISTICS OF WASTE

Color: <input checked="" type="checkbox"/> White/Clear <input type="checkbox"/> Black/Brown <input type="checkbox"/> Other	Suspended Solids <input checked="" type="checkbox"/> 0-1 % <input type="checkbox"/> 3-5 % <input type="checkbox"/> 1-3 % <input type="checkbox"/> > 5%	Layers: <input type="checkbox"/> Multi layered <input type="checkbox"/> Bi-Layered <input checked="" type="checkbox"/> Single Phase	Specific Gravity: <input type="checkbox"/> <0.8 <input checked="" type="checkbox"/> 1.0 — 1.2 <input type="checkbox"/> 0.8 — 1.0 <input type="checkbox"/> 1.3 — 1.4 Exact / Other <input type="text"/>
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pH: ☐ NA ☐ < 2 ☒ 2 — 4 ☐ 4 — 6 ☐ 6 — 8 ☐ 8-10 ☐ 10 — 12.5 ☐ > 12.5

Liquid Flash Point: ☐ <73°F ☐ 73—100°F ☐ 101—140°F ☐ 141—200°F ☒ >200°F ☐ None ☒ Closed Cup ☐ Open Cup

VOC CONCENTRATION - 120,000 () PPM (MUST BE COMPLETED)

TOTAL COMPOSITION OF WASTE - MUST BE EQUAL TO OR GREATER THAN 100% (LIST EACH CONSTITUENT <= 0.1%)

CONSTITUENT	MAX	MIN	CONSTITUENT	MAX	MIN
Acetic Acid Vinegar	12	12			
Water	88	88			

Metals: Indicate if this waste contains any of the following metals

If Generator knowledge-provide backup ☐ Lab Analysis ☒ Generator Knowledge☐ TCLP ☐ TOTAL

	Not Present	Concentration		Not Present	Concentration				
PCB	<input checked="" type="checkbox"/>	ppm	Aromatic Amine	<input checked="" type="checkbox"/>	ppm	Arsenic (As)	D004	<input checked="" type="checkbox"/>	<5 ppm
Dioxins	<input checked="" type="checkbox"/>	ppm	Pesticides	<input checked="" type="checkbox"/>	ppm	Barium (Ba)	D005	<input checked="" type="checkbox"/>	<100 ppm
Cyanides Reactive	<input checked="" type="checkbox"/>	ppm	Rodenticides	<input checked="" type="checkbox"/>	ppm	Cadmium (Cd)	D006	<input checked="" type="checkbox"/>	<1 ppm
Cyanides Total	<input checked="" type="checkbox"/>	ppm	Fungicides	<input checked="" type="checkbox"/>	ppm	Chromium (Cr)	D007	<input checked="" type="checkbox"/>	<5 ppm
Sulfides Reactive	<input checked="" type="checkbox"/>	ppm				Lead (Pb)	D008	<input checked="" type="checkbox"/>	<5 ppm
Sulfides Total	<input checked="" type="checkbox"/>	ppm				Mercury (Hg)	D009	<input checked="" type="checkbox"/>	<0.2 ppm
						Selenium (Se)	D010	<input checked="" type="checkbox"/>	<1 ppm
						Silver (Ag)	D011	<input checked="" type="checkbox"/>	<5 ppm

TCLP Organics D012 — D043 above regulatory limits: Present ☐ Not Present ☒

IS WASTE ANY OF THE FOLLOWING?

At Least One Box Must Be Checked.

- ☐ Radioactive ☐ Water Reactive ☐ Oxidizer ☐ Shock Sensitive ☐ Reactive (other) ☐ DOT Explosives
☐ NIOSH Human-Positive Carcinogens ☐ NESHAP Wastes (Benzene, etc.) ☐ Biological ☒ None Apply

SHIPPING INFORMATION

1. Is this a DOT Hazardous Material (49CFR 172.101 & 173 Subpart D)? ☒ Yes ☐ No
2. Reportable Quantity (RQ) in pounds 5,000
3. DOT Shipping Name Acetic Acid Solution Hazard Class 8 UN/NA UN2790
PG III ERG 153 Hazardous Constituents for "n.o.s." _____
4. Method of Shipment: ☒ Bulk Tanker ☐ Vac truck ☐ Rail Car ☐ Drums ☐ Totes
5. Number of Units to Ship Now 3,700 6. Anticipated Volume / Units per Year: 3,700 or ☐ One Time
6. Special Handling Requirements including PPE: _____

CERTIFICATION STATEMENT

I hereby represent and warrant that I have personally examined and am familiar with the information contained and submitted in this and all attached documents. Based on my inquiry and personal knowledge of those individuals responsible for supplying or obtaining the information, the information contained herein is true, accurate, and complete to the best of my knowledge and belief. Furthermore, no material fact has been omitted as to make this information misleading. I understand that others may rely on this representation and warranty in the handling and processing of the waste material described herein.

If this box is checked ☐ I request Environmental Geo-Technologies not to correct any inconsistencies. Any corrections Environmental Geo-Technologies makes will be consistent with the results of the sample characterization and/or regulatory requirements.

Printed Name: Jeanne Bessinger Werth Title: CEO
Generator's Signature: Jeanne Bessinger Werth Date: July 11, 2022

GENERATOR'S CHAIN OF CUSTODY RECORD INSTRUCTIONS: PLEASE collect a representative 1-quart sample of the waste described in the above referenced GENERATORS WASTE PROFILE REPORT using an appropriate container. A representative sample is one obtained using any of the applicable sampling methods cited in 40 CFR 261-Appendix 1. Fill in the sampling information in the spaces provided below. If you have problems obtaining a representative sample of your waste, please contact your Environmental Geo-Technologies representative.

1. _____ 2. _____
SAMPLING METHOD COLLECTION POINT

3. _____
SAMPLE COLLECTOR'S NAME, TITLE, EMPLOYER

4. Sample No. _____ Preservation: Yes ☐ No ☐

5. CHAIN OF CUSTODY Each person who handles the sample must sign below when the sample passes from one to another.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time



Republic Services

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #
6440229222

Expiration Date
6/28/2023

I. Decision Request:

☒ Initial ☐ Recertification ☐ Change

Disposal Facility: 6440 - Detroit Ind Well

Generator Name: HIGH PERFORMANCE METAL FINISHING INC.

Generator Site Address: 1821 VANDERBILT AVE.

City: PORTAGE

County:

State: MI

Zip:

Name of Waste: EP RINSE WATER

Estimated Annual Volume: 12000 Gallons

II. Special Waste Department Decision:

☒ Approved ☐ Rejected

Management Method(s):

☐ Landfill ☐ Solidification ☐ Bioremediation ☒ Deep Well ☐ Transfer Facility

Problematic Special Waste according to Republic?

☐ Yes ☒ No

If yes, which one?

Approved by Special Waste Review Committee?

☐ Yes ☐ No ☒ Not Applicable

Precautions, Conditions or Limitations on Approval

The site must ensure that all pre-acceptance and verification analytical is performed in accordance with the site's permit requirements prior to acceptance and disposal of the profiled waste.

Special Waste Analyst Signature:

Date: 7/13/2022

Name (Printed): Stephen Brown

III. Facility Decision:

☒ Approved ☐ Rejected

Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete

General Manager or Designee:

Date: 7/13/2022

Name (Printed): JOHN FROST

Republic Industrial and Energy Solutions, LLC
28470 Cirtin Dr. Romulus, MI 48174. Telephone 734 946 1000. Fax 734 946 1002

GENERATOR WASTE PROFILE
Profile # 6440229222

GENERATOR INFORMATION

Name: High Performance Metal Finishing Inc. USEPA ID # MID038818658
Facility Address: 1821 Vanderbilt Ave. SIC/NAICS Code: State Code: 332813
City: Portage State MI Zip Code: 49024
Contact: Pat Greene Title: President Phone () 269-327-8897 Fax: ()

BILLING INFORMATION

☐ SAME AS ABOVE

Company Name: ERG Environmental Services
Address: 13040 Merriman Rd, Suite 200
City: Livonia State: MI Zip Code: 48150
Attention: Accounts Payable Title: Phone () 734-437-9650 Fax: ()

WASTE INFORMATION

Name of Waste/Common Chemical Name:
EP Rinse Water

Process Generating Waste (Please be specific, incomplete information may delay the approval process):

Rinse water from the electropolishing of stainless steel

USEPA / STATE WASTE IDENTIFICATION

- This waste is considered to be: ☐ Non Hazardous Liquid Industrial Waste ☒ Hazardous Waste
- Regulated by TSCA? ☐ Yes ☒ No (PCBs, etc.)
- List ALL Applicable Waste Codes: D002 D007

PHYSICAL CHARACTERISTICS OF WASTE

Color: <input type="checkbox"/> White/Clear <input type="checkbox"/> Black/Brown <input checked="" type="checkbox"/> Other (yellow)	Suspended Solids: <input checked="" type="checkbox"/> 0-1% <input type="checkbox"/> 3-5% <input type="checkbox"/> 1-3% <input type="checkbox"/> > 5%	Layers: <input type="checkbox"/> Multi layered <input type="checkbox"/> Bi-Layered <input checked="" type="checkbox"/> Single Phase	Specific Gravity: <input type="checkbox"/> <0.8 <input type="checkbox"/> 1.0-1.2 <input type="checkbox"/> 0.8-1.0 <input type="checkbox"/> 1.3-1.4 Exact / Other
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pH: ☐ <2 ☐ 2-4 ☐ 4-6 ☐ 6-8 ☐ 8-10 ☐ 10-12.5 ☐ >12.5

Liquid Flash Point: ☐ <73°F ☐ 73-100°F ☐ 101-140°F ☐ 141-200°F ☐ >200°F ☐ None ☐ Closed Cup ☐ Open Cup

VOC CONCENTRATION: 0 PPM (MUST BE COMPLETED)

TOTAL COMPOSITION OF WASTE - MUST BE EQUAL TO OR GREATER THAN 100% (LIST EACH CONSTITUENT <= 0.1%)

CONSTITUENT	MAX	MIN	CONSTITUENT	MAX	MIN
Water	95	99			
Phosphoric Acid	1	3			
Sulfuric Acid	1	2			

Metals: Indicate if the waste contains any of the following metals.

If Generator knowledge-provide backup to Lab Analysis ☒ Generator Knowledge☒ TCLP ☐ TOTAL

Not Present	Concentration	Not Present	Concentration				
PCB	2 ppm	Aromatic Amine	2 ppm	Arsenic (As)	D004	2 <5	ppm 0.23 ppm
Dioxins	2 ppm	Pesticides	2 ppm	Barium (Ba)	D005	2 <100	ppm ppm
Cyanides Reactive	2 ppm	Rodenticides	2 ppm	Cadmium (Cd)	D006	2 <1	ppm ppm
Cyanides Total	2 ppm	Fungicides	2 ppm	Chromium (Cr)	D007	2 <6	ppm 189 ppm
Sulfides Reactive	2 ppm			Lead (Pb)	D008	2 <5	ppm ppm
Sulfides Total	2 ppm			Mercury (Hg)	D009	2 <0.2	ppm ppm
				Selenium (Se)	D010	2 <1	ppm ppm
				Silver (Ag)	D011	2 <5	ppm ppm

TCLP Organics D012 — D043 above regulatory limits: Present ☐ No Present ☒

IS WASTE ANY OF THE FOLLOWING?

At Least One Box Must Be Checked.

- ☐ Radioactive ☐ Water Reactive ☐ Oxidizer ☐ Shock Sensitive ☐ Reactive (other) ☐ DOT Explosives
☐ NIOSH Human-Poison Carcinogens ☐ NESHAP Wastes (Benzene, etc.) ☐ Biological ☒ None Apply

SHIPPING INFORMATION

1. Is this a DOT Hazardous Material (49CFR 172.101 & 173 Subpart D)? ☒ Yes ☐ No
 2. Reportable Quantity (RQ) in pounds: 100
 3. DOT Shipping Name: Waste Corrosive Liquid, Acidic, Inorganic, n.o.s. Hazard Class: 8 UNNA: UN3264
 pg II ERG 154 Hazardous Constituents for "n.o.s.": Phosphoric Acid, Sulfuric Acid
 4. Method of Shipment: ☒ Bulk Tanker ☐ Vactor ☐ Rail Car ☐ Drums ☐ Toies
 5. Number of Units to Ship Now: 4,000 gal 6. Anticipated Volume / Units per Year: 12,000 gal or ☐ One Time
 6. Special Handling Requirements including PPE:

CERTIFICATION STATEMENT

I hereby represent and warrant that I have personally examined and am familiar with the information contained and submitted in this and all attached documents. Based on my inquiry and personal knowledge of those individuals responsible for supplying or obtaining the information, the information contained herein is true, accurate, and complete to the best of my knowledge and belief. Furthermore, no material fact has been omitted as to make this information misleading. I understand that others may rely on this representation and warranty in the handling and processing of the waste material described herein.

If this box is checked ☐ I request Environmental Geo-Technologies not to correct any inconsistencies. Any corrections Environmental Geo-Technologies makes will be consistent with the results of the sample characterization and/or regulatory requirements.

Printed Name: PAT GREENEGenerator's Signature: Pat GreeneTitle: TRES.Date: 6/23/22

GENERATOR'S CHAIN OF CUSTODY RECORD INSTRUCTIONS: PLEASE collect a representative 1-quart sample of the waste described in the above referenced GENERATOR'S WASTE PROFILE REPORT using an appropriate container. A representative sample is one obtained using any of the applicable sampling methods cited in 40 CFR 261-Appendix 1. Fill in the sampling information in the spaces provided below. If you have problems obtaining a representative sample of your waste, please contact your Environmental Geo-Technologies representative.

1. grab 2. holding tank
 SAMPLING METHOD COLLECTION POINT
 3. C. Petersen Sales & Erg
 SAMPLE COLLECTOR'S NAME, TITLE, EMPLOYER

4. Sample No. _____ Preservation Yes ☐ No ☐

5. CHAIN OF CUSTODY Each person who handles the sample must sign below when the sample passes from one to another.

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time



Republic Services

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

Waste Profile # 6440229634		Expiration Date 7/19/2023	
I. Decision Request:		<input checked="" type="checkbox"/> Initial <input type="checkbox"/> Recertification <input type="checkbox"/> Change	
Disposal Facility: 6440 - Detroit Ind Well			
Generator Name: CYCLE CHEM, INC.			
Generator Site Address: 550 INDUSTRIAL DRIVE			
City: LEWISBERRY	County: <input type="text"/>	State: PA	Zip: <input type="text"/>
Name of Waste: AQUEOUS WASTE WITH VOLITILE ORGANIC COMPOUNDS			
Estimated Annual Volume: 500 Drums			

II. Special Waste Department Decision:

☒ Approved ☐ Rejected

Management Method(s): ☐ Landfill ☐ Solidification ☐ Bioremediation ☒ Deep Well ☐ Transfer Facility

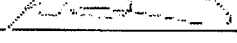
Problematic Special Waste according to Republic? ☐ Yes ☒ No

If yes, which one?

Approved by Special Waste Review Committee? ☐ Yes ☐ No ☒ Not Applicable

Precautions, Conditions or Limitations on Approval

The site must ensure that all pre-acceptance and verification analytical is performed in accordance with the site's permit requirements prior to acceptance and disposal of the profiled waste.

Special Waste Analyst Signature: 
Date: 7/18/2022

Name (Printed): KEITH DIAMANTI

III. Facility Decision:

☒ Approved ☐ Rejected

Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: 
Date: 7/18/2022

Name (Printed): JOHN FROST

Republic Industrial and Energy Solutions, LLC

28470 Citrin Dr, Romulus, MI 48174. Telephone 734 946 1000. Fax 734 946 1002

GENERATOR WASTE PROFILEProfile # 6440229634**GENERATOR INFORMATION**

Name: Cycle Chem, Inc USEPA ID # PAD067098822
Facility Address: 550 Industrial Drive SIC/NAICS Code: 562112
City: Lewisberry State: PA Zip Code: 17339
Contact: Jay Perez Title: Specialist Phone: (717) 938-4700 Fax: (717) 938-0976

BILLING INFORMATION☒ SAME AS ABOVE

Company Name: _____
Address: _____
City: _____ State: _____ Zip Code: _____
Attention: _____ Title: _____ Phone: () _____ Fax: () _____

WASTE INFORMATION

Name of Waste/Common Chemical Name:

Aqueous Waste with Volatile Organic Compounds

Process Generating Waste (Please be specific, incomplete information may delay the approval process):

G61 Hazardous waste recieved from offsite for storage/bulking and transfer offsite for treatment and disposal**USEPA / STATE WASTE IDENTIFICATION**

1. This waste is considered to be: ☐ Non Hazardous Liquid Industrial Waste ☒ Hazardous Waste
2. Regulated by TSCA? ☐ Yes ☒ No (PCBs, etc.)
3. List ALL Applicable Waste Codes: D018 V019 F005 D019 U211 F001 F002 D002 see continuation page

PHYSICAL CHARACTERISTICS OF WASTE

Color: <input checked="" type="checkbox"/> White/Clear <input type="checkbox"/> Black/Brown <input type="checkbox"/> Other	Suspended Solids <input checked="" type="checkbox"/> 0-1 % <input type="checkbox"/> 3-5 % <input type="checkbox"/> 1-3 % <input type="checkbox"/> > 5%	Layers: <input type="checkbox"/> Multi layered <input type="checkbox"/> Bi-Layered <input checked="" type="checkbox"/> Single Phase	Specific Gravity: <input type="checkbox"/> <0.8 <input checked="" type="checkbox"/> 1.0 — 1.2 <input type="checkbox"/> 0.8 — 1.0 <input type="checkbox"/> 1.3 — 1.4 Exact / Other <input type="text"/>
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pH: ☐ NA ☐ < 2 ☐ 2 — 4 ☒ 4 — 6 ☐ 6 — 8 ☐ 8-10 ☐ 10 — 12.5 ☐ > 12.5Liquid Flash Point: ☐ <73°F ☐ 73—100°F ☐ 101—140°F ☐ 141—200°F ☒ >200°F ☐ None ☐ Closed Cup ☐ Open CupVOC CONCENTRATION - <499 PPM (MUST BE COMPLETED)

TOTAL COMPOSITION OF WASTE - MUST BE EQUAL TO OR GREATER THAN 100% (LIST EACH CONSTITUENT <= 0.1%)

CONSTITUENT	MAX	MIN	CONSTITUENT	MAX	MIN
Water	99	100			%
Sediment (if present)	0.1	1.0			%
Volatile Organic Compounds	0.01	0.05			%

If Generator knowledge-provide backup ☐ Lab Analysis ☒ Generator Knowledge

☐ TCLP ☒ TOTAL

	Not Present	Concentration	Not Present	Concentration					
					Arsenic (As)	D004	☑	<5	ppm
					Barium (Ba)	D005	☑	<100	ppm
PCB	☑	ppm	Aromatic Amine	☑	___ppm	Cadmium (Cd)	D006	☑	<1
Dioxins	☑	ppm	Pesticides	☑	___ppm	Chromium (Cr)	D007	☑	<5
Cyanides Reactive	☑	ppm	Rodenticides	☑	___ppm	Lead (Pb)	D008	☑	<5
Cyanides Total	☑	ppm	Fungicides	☑	___ppm	Mercury (Hg)	D009	☑	<0.2
Sulfides Reactive	☑	ppm				Selenium (Se)	D010	☑	<1
Sulfides Total	☑	ppm				Silver (Ag)	D011	☑	<5

TCLP Organics D012 — D043 above regulatory limits: Present ☒ Not Present ☐

At Least One Box Must Be Checked.

☐ Radioactive ☐ Water Reactive ☐ Oxidizer ☐ Shock Sensitive ☐ Reactive (other) ☐ DOT Explosives☐ NIOSH Human-Positive Carcinogens ☐ NESHAP Wastes (Benzene, etc.) ☐ Biological ☒ None Apply

SHIPPING INFORMATION

1. Is this a DOT Hazardous Material (49CFR 172.101 & 173 Subpart D)? ☒ Yes ☐ No

2. Reportable Quantity (RQ) in pounds 10

3. DOT Shipping Name **RQ, Hazardous Waste Liquids, N.O.S.** Hazard Class **9** UN/NA **3082**

PG III ERG 171 Hazardous Constituents for "n.o.s." Tetrachloroethylene, Benzene

4. Method of Shipment: ☒ Bulk Tanker ☐ Vac truck ☐ Rail Car ☒ Drums ☒ Totes

5. Number of Units to Ship Now 20 6. Anticipated Volume / Units per Year: 500 or ☐ One Time

6. Special Handling Requirements Including PPE:

~~No Special Handling required~~

CERTIFICATION STATEMENT

I hereby represent and warrant that I have personally examined and am familiar with the information contained and submitted in this and all attached documents. Based on my inquiry and personal knowledge of those individuals responsible for supplying or obtaining the information, the information contained herein is true, accurate, and complete to the best of my knowledge and belief. Furthermore, no material fact has been omitted as to make this information misleading. I understand that others may rely on this representation and warranty in the handling and processing of the waste material described herein.

If this box is checked ☐ I request Republic Industrial & Energy Solutions not to correct any inconsistencies. Any corrections Republic Industrial & Energy Solutions makes will be consistent with the results of the sample characterization and/or regulatory requirements.

Printed Name: Jay Perez

Title: Specialist

Generator's Signature:

Date: 7/18/22

GENERATOR'S CHAIN OF CUSTODY RECORD INSTRUCTIONS: PLEASE collect a representative 1-quartsample of the waste described in the above referenced GENERATORS WASTE PROFILE REPORT using an appropriate container. A representative sample is one obtained using any of the applicable sampling methods cited in 40 CFR 261-Appendix 1. Fill in the sampling information in the spaces provided below. If you have problems obtaining a representative sample of your waste, please contact your Republic Industrial & Energy Solutions representative.

1. _____ 2. _____
SAMPLING METHOD COLLECTION POINT

3. SAMPLE COLLECTOR'S NAME, TITLE, EMPLOYER

4. Sample No. _____ Preservation: Yes ☐ No ☐

5. CHAIN OF CUSTODY *Each person who handles the sample must sign below when the sample passes from one to another.*

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Supplemental Analysis Attached:

Additional RCRA codes for Aqueous waste with volatile organic compounds profile

U044
D027
U072
D028
U077
D029
U078
D034
U131
D035
U159
F005
D038
D039
U210
D040
U228
D043
U043
F003



Republic Services

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #
6440229568

Expiration Date
7/1/2023

I. Decision Request:

☒ Initial ☐ Recertification ☐ Change

Disposal Facility: 6440 - Detroit Ind Well

Generator Name: AAM-FRASER

Generator Site Address: 18450 15 MILE RD

City: FRASER

County:

State: MI

Zip:

Name of Waste: GRAPHITE WATER

Estimated Annual Volume: 130000 Gallons

II. Special Waste Department Decision:

☒ Approved ☐ Rejected

Management Method(s): ☐ Landfill ☐ Solidification ☐ Bioremediation ☒ Deep Well ☐ Transfer Facility

Problematic Special Waste according to Republic? ☐ Yes ☒ No

If yes, which one?

Approved by Special Waste Review Committee? ☐ Yes ☐ No ☒ Not Applicable

Precautions, Conditions or Limitations on Approval

The site must ensure that all pre-acceptance and verification analytical is performed in accordance with the site's permit requirements prior to acceptance and disposal of the profiled waste.

Special Waste Analyst Signature:

Name (Printed): Stephen Brown

Date: 7/18/2022

III. Facility Decision:

☒ Approved ☐ Rejected

Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

Rodriguez, Tom

Digitally signed by: Rodriguez, Tom
DN: CN = Rodriguez, Tom OU =
Regions, East, Users
Date: 2022.07.21 08:27:16 -0500

General Manager or Designee:

Name (Printed): Tom Rodriguez

Date: 7/18/2022

Republic Industrial and Energy Solutions, LLC

28470 Citrin Dr, Romulus, MI 48174. Telephone 734 946 1000. Fax 734 946 1002

GENERATOR WASTE PROFILE

Profile # 6440229568

GENERATOR INFORMATION

Name: AAM-Fraser USEPA ID # MID084300987
Facility Address: 18450 15 Mile Rd SIC/NAICS Code: State Code: _____
City: Fraser State: MI Zip Code: 48026
Contact: Shakira Jacobs Title: EHS Phone: (313) 915-5516 Fax: () _____

BILLING INFORMATION☐ SAME AS ABOVE

Company Name: Environmental & Disposal Management LLC
Address: 1900 Stephenson Hwy, Suite 100
City: Troy State: MI Zip Code: 48063
Attention: Lamar Gabbara Title: CFO Phone: (313) 989-8301 Fax: () _____

WASTE INFORMATION

Name of Waste/Common Chemical Name:

Graphite water

Process Generating Waste (Please be specific, incomplete information may delay the approval process):

~~Graphite is used in the forging process. Some of the graphite is lost through leaks that need repair. Some of the graphite is also generated when flushing the press of spent graphite and oil. The system is closed loop. SDS Sheet ID: AMLUBE 1127 Analytical Information~~
Sample ID Gray water/ Graphite water sample date 6/27/2022

USEPA / STATE WASTE IDENTIFICATION

1. This waste is considered to be: ☒ Non Hazardous Liquid Industrial Waste ☐ Hazardous Waste
2. Regulated by TSCA? ☐ Yes ☒ No (PCBs, etc.) SJ 7/15/22
3. List ALL Applicable Waste Codes: _____

PHYSICAL CHARACTERISTICS OF WASTE

Color: <input type="checkbox"/> White/Clear <input type="checkbox"/> Black/Brown <input checked="" type="checkbox"/> Other	Suspended Solids <input type="checkbox"/> 0-1 % <input checked="" type="checkbox"/> 3-5 % <input type="checkbox"/> 1-3 % <input type="checkbox"/> > 5%	Layers: <input type="checkbox"/> Multi layered <input type="checkbox"/> Bi-Layered <input checked="" type="checkbox"/> Single Phase	Specific Gravity: <input type="checkbox"/> <0.8 <input type="checkbox"/> 1.0—1.2 <input type="checkbox"/> 0.8—1.0 <input checked="" type="checkbox"/> 1.3—1.4 Exact / Other <input type="text"/>
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pH: ☐ NA ☐ < 2 ☐ 2—4 ☐ 4—6 ☒ 6—8 ☐ 8-10 ☐ 10—12.5 ☐ >12.5Liquid Flash Point: ☐ <73°F ☐ 73—100°F ☐ 101—140°F ☐ 141—200°F ☒ >200°F ☐ None ☐ Closed Cup ☐ Open Cup

VOC CONCENTRATION - <5PPM PPM (MUST BE COMPLETED)

TOTAL COMPOSITION OF WASTE - MUST BE EQUAL TO OR GREATER THAN 100% (LIST EACH CONSTITUENT <=> 1= 0.1%)

CONSTITUENT	MAX	MIN	CONSTITUENT	MAX	MIN
water	70	77			
Graphit	30	23			

Metals: Indicate if this waste contains any of the following metals

If Generator knowledge-provide backup ☒ Lab Analysis ☐ Generator Knowledge

☒ TCLP ☐ TOTAL

	Not Present	Concentration	Not Present	Concentration					
PCB	<input checked="" type="checkbox"/>	ppm	Aromatic Amine	<input checked="" type="checkbox"/>	ppm	Arsenic (As)	D004	<input checked="" type="checkbox"/>	<5 ppm
Dioxins	<input checked="" type="checkbox"/>	ppm	Pesticides	<input checked="" type="checkbox"/>	ppm	Barium (Ba)	D005	<input checked="" type="checkbox"/>	<100 ppm
Cyanides Reactive	<input checked="" type="checkbox"/>	ppm	Rodenticides	<input checked="" type="checkbox"/>	ppm	Cadmium (Cd)	D006	<input checked="" type="checkbox"/>	<1 ppm
Cyanides Total	<input checked="" type="checkbox"/>	ppm	Fungicides	<input checked="" type="checkbox"/>	ppm	Chromium (Cr)	D007	<input checked="" type="checkbox"/>	<5 ppm
Sulfides Reactive	<input checked="" type="checkbox"/>	ppm				Lead (Pb)	D008	<input checked="" type="checkbox"/>	<5 ppm
Sulfides Total	<input checked="" type="checkbox"/>	ppm				Mercury (Hg)	D009	<input checked="" type="checkbox"/>	<0.2 ppm
						Selenium (Se)	D010	<input checked="" type="checkbox"/>	<1 ppm
						Silver (Ag)	D011	<input checked="" type="checkbox"/>	<5 ppm

TCLP Organics D012 --- D043 above regulatory limits: Present ☐ Not Present ☒

IS WASTE ANY OF THE FOLLOWING?

At Least One Box Must Be Checked.

- ☐ Radioactive ☐ Water Reactive ☐ Oxidizer ☐ Shock Sensitive ☐ Reactive (other) ☐ DOT Explosives
☐ NIOSH Human-Positive Carcinogens ☐ NESHAP Wastes (Benzene, etc.) ☐ Biological ☒ None Apply

SHIPPING INFORMATION

1. Is this a DOT Hazardous Material (49CFR 172.101 & 173 Subpart D)? ☐ Yes ☒ No
 2. Reportable Quantity (RQ) in pounds _____
 3. DOT Shipping Name Graphite Water Non regulated material Hazard Class _____ UN/NA _____
 PG _____ ERG _____ Hazardous Constituents for "n.o.s." _____
 4. Method of Shipment: ☒ Bulk Tanker ☐ Vac truck ☐ Rail Car ☐ Drums ☐ Totes
 5. Number of Units to Ship Now 2500 6. Anticipated Volume / Units per Year: 130,000 or ☐ One Time
 6. Special Handling Requirements Including PPE:
None

CERTIFICATION STATEMENT

I hereby represent and warrant that I have personally examined and am familiar with the information contained and submitted in this and all attached documents. Based on my inquiry and personal knowledge of those individuals responsible for supplying or obtaining the information, the information contained herein is true, accurate, and complete to the best of my knowledge and belief. Furthermore, no material fact has been omitted as to make this information misleading. I understand that others may rely on this representation and warranty in the handling and processing of the waste material described herein.

If this box is checked ☐ I request Republic Industrial & Energy Solutions not to correct any inconsistencies. Any corrections Republic Industrial & Energy Solutions makes will be consistent with the results of the sample characterization and/or regulatory requirements.

Printed Name: Shakira Jacobs Title: NEHS Representative
 Generator's Signature: Shakira Jacobs Date: 07/15/2022

GENERATOR'S CHAIN OF CUSTODY RECORD INSTRUCTIONS: PLEASE collect a representative 1-quart sample of the waste described in the above referenced GENERATORS WASTE PROFILE REPORT using an appropriate container. A representative sample is one obtained using any of the applicable sampling methods cited in 40 CFR 261-Appendix 1. Fill in the sampling information in the spaces provided below. If you have problems obtaining a representative sample of your waste, please contact your Republic Industrial & Energy Solutions representative.

1. Grab 2. Tank
 SAMPLING METHOD COLLECTION POINT
 3. Jay Kanapsky
 SAMPLE COLLECTOR'S NAME, TITLE, EMPLOYER

4. Sample No. 1 Preservation: Yes ☒ No ☐

5. CHAIN OF CUSTODY Each person who handles the sample must sign below when the sample passes from one to another.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

FINGERPRINT FORM

REPUBLIC INDUSTRIAL AND ENERGY SOLUTIONS, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7/6/22
Receiving ID#	Graph. Te Work
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	AAM - Fraser
Client	
Transporter	
Time in	
Time out	
Received by	D.H.
Sampled by	CJ:ejt

LAB INFORMATION	
Compatible? (RT#)	✓
PCBs (ppm) (Oily Waste Only)?	N/A
TOC ppm (CC Waste Only)?	
Flash Point (F)	2140
pH (S.U.)	6.39
Cyanides? (mg/L)	<30
Sulfides? (ppm)?	<20
Specific Gravity	1.00
Physical Description	1.944ms
Stream Consistency	Yes <input checked="" type="radio"/> No
Oil in Sample?	Yes <input checked="" type="radio"/> No
Temperature (F)	74
Conductivity	1.944ms
% Solids	0.63
Turbidity	<input checked="" type="radio"/> Yes <input type="radio"/> No
Color	Black
TSS (%)	0.1
Radiation Screen (as needed)	Neg
Lab Signature/Initials	J.H.

(See Attached Lab Notes)



Republic Services

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #
6440229939

Expiration Date
7/12/2023

I. Decision Request:

☒ Initial ☐ Recertification ☐ Change

Disposal Facility: 6440 - Detroit Ind Well

Generator Name: NETWORK MATERIALS & RESOURCES INC.

Generator Site Address: 31 GOLDEN GATE COURT

City: TORONTO

County:

State: ON

Zip:

Name of Waste: TRIVALENT CHROME

Estimated Annual Volume: 30,000 Gallons

II. Special Waste Department Decision:

☒ Approved ☐ Rejected

Management Method(s): ☐ Landfill ☐ Solidification ☐ Bioremediation ☒ Deep Well ☐ Transfer Facility

Problematic Special Waste according to Republic? ☐ Yes ☒ No

If yes, which one?

Approved by Special Waste Review Committee? ☐ Yes ☐ No ☒ Not Applicable

Precautions, Conditions or Limitations on Approval

The site must ensure that all pre-acceptance and verification analytical is performed in accordance with the site's permit requirements prior to acceptance and disposal of the profiled waste.

Special Waste Analyst Signature: 

Date: 7/25/2022

Name (Printed): KEITH DIAMANTI

III. Facility Decision:

☒ Approved ☐ Rejected

Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

Rodriguez, Tom

Digitally signed by: Rodriguez, Tom
DN: CN = Rodriguez, Tom OU =
Regions, East, Users
Date: 2022.07.25 09:26:13 -05'00'

General Manager or Designee: _____

Date: 7/25/2022

Name (Printed): Tom Rodriguez

Republic Industrial and Energy Solutions, LLC

28470 Citrin Dr, Romulus, MI 48174. Telephone 734 946 1000, Fax 734 946 1002

GENERATOR WASTE PROFILE

6440229939

Profile #

GENERATOR INFORMATION

Name: Network Materials & Resources Inc. USEPA ID # MIR000016055
Facility Address: 31 Golden Gate Court SIC/NAICS Code: NAICS 541620, 562210
City: Toronto State: ON Zip Code: M1P 3A4
Contact: Mike Aston Title: General Manager Phone: (416) 299-0116 Fax: (416) 299-9649

BILLING INFORMATION☐ SAME AS ABOVE

Company Name: Network Environmental Services Inc.
Address: 31 Golden Gate Court
City: Toronto State: ON Zip Code: M1P 3A4
Attention: Giles Goulding Title: Controller Phone: (416) 299-0116 Fax: (416) 299-9649

WASTE INFORMATION

Name of Waste/Common Chemical Name:

Trivalent Chrome

Process Generating Waste (Please be specific, incomplete information may delay the approval process):

Passivation on galvanized parts**USEPA / STATE WASTE IDENTIFICATION**

1. This waste is considered to be: ☐ Non Hazardous Liquid Industrial Waste ☒ Hazardous Waste
2. Regulated by TSCA? ☐ Yes ☐ No (PCBs, etc.)
3. List ALL Applicable Waste Codes: D002, D004, D007

PHYSICAL CHARACTERISTICS OF WASTE

Color: <input type="checkbox"/> White/Clear <input type="checkbox"/> Black/Brown <input checked="" type="checkbox"/> Other	Suspended Solids <input type="checkbox"/> 0-1 % <input type="checkbox"/> 3-5 % <input checked="" type="checkbox"/> 1-3 % <input type="checkbox"/> > 5%	Layers: <input type="checkbox"/> Multi layered <input type="checkbox"/> Bi-Layered <input checked="" type="checkbox"/> Single Phase	Specific Gravity: <input type="checkbox"/> <0.8 <input checked="" type="checkbox"/> 1.0 — 1.2 <input type="checkbox"/> 0.8 — 1.0 <input type="checkbox"/> 1.3 — 1.4 Exact / Other <u>1.1</u>	
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pH: ☐ NA ☒ < 2 ☐ 2 — 4 ☐ 4 — 6 ☐ 6 — 8 ☐ 8-10 ☐ 10 — 12.5 ☐ >12.5Liquid Flash Point: ☐ <73°F ☐ 73—100°F ☐ 101—140°F ☐ 141—200°F ☐ >200°F ☒ None ☐ Closed Cup ☐ Open CupVOC CONCENTRATION - 0 PPM (MUST BE COMPLETED)

TOTAL COMPOSITION OF WASTE - MUST BE EQUAL TO OR GREATER THAN 100% (1ST EACH CONSTITUENT <=> 1= 0.1%)

CONSTITUENT	MAX	MIN	CONSTITUENT	MAX	MIN
Chromium Nitrate	0	10	Phosphoric Acid	0	5
Chrome (III) Phosphate	0	5	Ethanol	0	5
Methanol	0	5	Water	80	99

Metals: Indicate if this waste contains any of the following metals

If Generator knowledge-provide backup ☐ Lab Analysis ☒ Generator Knowledge

☐ TCLP ☒ TOTAL

	Not Present	Concentration		Not Present	Concentration							
PCB	<input checked="" type="checkbox"/>	ppm	Aromatic Amine	<input checked="" type="checkbox"/>	ppm	Arsenic (As)	D004	<input type="checkbox"/> <5	ppm	5	ppm	
Dioxins	<input checked="" type="checkbox"/>	ppm	Pesticides	<input checked="" type="checkbox"/>	ppm	Barium (Ba)	D005	<input checked="" type="checkbox"/> <100	ppm		ppm	
Cyanides Reactive	<input checked="" type="checkbox"/>	ppm	Rodenticides	<input checked="" type="checkbox"/>	ppm	Cadmium (Cd)	D006	<input checked="" type="checkbox"/> <1	ppm		ppm	
Cyanides Total	<input checked="" type="checkbox"/>	ppm	Fungicides	<input checked="" type="checkbox"/>	ppm	Chromium (Cr)	D007	<input type="checkbox"/> <5	ppm	13900	ppm	
Sulfides Reactive	<input checked="" type="checkbox"/>	ppm				Lead (Pb)	D008	<input checked="" type="checkbox"/> <5	ppm		ppm	
Sulfides Total	<input checked="" type="checkbox"/>	ppm				Mercury (Hg)	D009	<input checked="" type="checkbox"/> <0.2	ppm		ppm	
						Selenium (Se)	D010	<input checked="" type="checkbox"/> <1	ppm		ppm	
						Silver (Ag)	D011	<input checked="" type="checkbox"/> <5	ppm		ppm	

TCLP Organics D012 — D043 above regulatory limits: Present ☐ Not Present ☒

IS WASTE ANY OF THE FOLLOWING?

At Least One Box Must Be Checked.

- ☐ Radioactive ☐ Water Reactive ☐ Oxidizer ☐ Shock Sensitive ☐ Reactive (other) ☐ DOT Explosives
☐ NIOSH Human-Positive Carcinogens ☐ NESHAP Wastes (Benzene, etc.) ☐ Biological ☒ None Apply

SHIPPING INFORMATION

1. Is this a DOT Hazardous Material (49CFR 172.101 & 173 Subpart D)? ☒ Yes ☐ No
2. Reportable Quantity (RQ) in pounds _____
3. DOT Shipping Name Corrosive Liquid, Acidic, Inorganic, nos Hazard Class 8 UN/NA 3264
PG II ERG _____ Hazardous Constituents for "n.o.s." Chromium Nitrate, Chrome III Phosphate
4. Method of Shipment: ☒ Bulk Tanker ☐ Vac truck ☐ Rail Car ☒ Drums ☒ Totes
5. Number of Units to Ship Now 3000 USG 6. Anticipated Volume / Units per Year: 30,000 USG or ☐ One Time
6. Special Handling Requirements including PPE: _____

CERTIFICATION STATEMENT

I hereby represent and warrant that I have personally examined and am familiar with the information contained and submitted in this and all attached documents. Based on my inquiry and personal knowledge of those individuals responsible for supplying or obtaining the information, the information contained herein is true, accurate, and complete to the best of my knowledge and belief. Furthermore, no material fact has been omitted as to make this information misleading. I understand that others may rely on this representation and warranty in the handling and processing of the waste material described herein.

If this box is checked ☐ I request Republic Industrial & Energy Solutions not to correct any inconsistencies. Any corrections Republic Industrial & Energy Solutions makes will be consistent with the results of the sample characterization and/or regulatory requirements.

Printed Name: Mike Aston Title: General Manager
Generator's Signature: Mike Aston Date: 12-7-2022

GENERATOR'S CHAIN OF CUSTODY RECORD INSTRUCTIONS: PLEASE collect a representative 1-quart sample of the waste described in the above referenced GENERATORS WASTE PROFILE REPORT using an appropriate container. A representative sample is one obtained using any of the applicable sampling methods cited in 40 CFR 261-Appendix 1. Fill in the sampling information in the spaces provided below. If you have problems obtaining a representative sample of your waste, please contact your Republic Industrial & Energy Solutions representative.

1. Grab _____ 2. Tote _____
SAMPLING METHOD _____ COLLECTION POINT _____
3. Mike Aston, Gen. Mgr., Network Materials & Resources
SAMPLE COLLECTOR'S NAME, TITLE, EMPLOYER _____

4. Sample No. 3CRDFS Preservation: Yes ☐ No ☒

5. CHAIN OF CUSTODY Each person who handles the sample must sign below when the sample passes from one to another.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
<u>Mike Aston</u>	<u>2022-7-12</u>	<u>10:30</u>			

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	7/14/22
Receiving ID#	Trivalent Chrome
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	Not waste
Client	
Transporter	
Time in	
Time out	
Received by	J.A.
Sampled by	C. J. A.

LAB INFORMATION	
Compatible? (RT#)	No
PCBs (ppm) (Oily Waste Only)?	N/A
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	1.65
Cyanides? (mg/L)	<30
Sulfides? (ppm)?	<200
Specific Gravity	1.04
Physical Description	1.79 U.D
Stream Consistency	Yes No
Oil in Sample?	Yes (No)
Temperature (F)	70
Conductivity	23.9 mS
% Solids	5.45
Turbidity	Yes No
Color	Blue-Green
TSS (%)	5.0
Radiation Screen (as needed)	Neg.
Lab Signature/Initials	J.A.

(See Lab Notes)

F039 Analysis



09-Sep-2022

Rick Sauve
Republic Industrial and Energy Solutions, LLC
28470 Cintrin Dr.
Romulus, MI 48174

Re: **(REIS) F039 Leachate analysis 08.03.2022**

Work Order: **22080355**

Dear Rick,

ALS Environmental received 1 sample on 03-Aug-2022 10:00 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 44.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Les Arnold

Les Arnold
General Manager

Report of Laboratory Analysis

Certificate No: MN 026-999-449

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Client: Republic Industrial and Energy Solutions, LLC
Project: (REIS) F039 Leachate analysis 08.03.2022
Work Order: 22080355

Case Narrative

Subcontracted analytical data has been appended to this report in its entirety.

Client: Republic Industrial and Energy Solutions, LLC
Project: (REIS) F039 Leachate analysis 08.03.2022
WorkOrder: 22080355

**QUALIFIERS,
ACRONYMS, UNITS**

ALS Group, USA

Date: 09-Sep-22

Client: Republic Industrial and Energy Solutions, LLC
Work Order: 22080355
Project: (REIS) F039 Leachate analysis 08.03.2022

QC BATCH REPORT

Batch ID: **201005** Instrument ID **GC12** Method: **SW8081B**

MBLK		Sample ID: PBLKW1-201005-201005				Units: µg/L		Analysis Date: 8/9/2022 05:17 PM		
Client ID:		Run ID: GC12_220809A				SeqNo: 8694643		Prep Date: 8/8/2022		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aldrin	ND	0.010								
Surr: Decachlorobiphenyl	0.2035	0	0.208	0	97.8	42-148	0			
Surr: Tetrachloro-m-xylene	0.1943	0	0.208	0	93.4	57-141	0			

LCS		Sample ID: PLCSW1-201005-201005				Units: µg/L		Analysis Date: 8/9/2022 05:45 PM		
Client ID:		Run ID: GC12_220809A				SeqNo: 8694645		Prep Date: 8/8/2022		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aldrin	0.1668	0.010	0.167	0	99.9	51-164	0			
Surr: Decachlorobiphenyl	0.1897	0	0.208	0	91.2	42-148	0			
Surr: Tetrachloro-m-xylene	0.1993	0	0.208	0	95.8	57-141	0			

LCSD		Sample ID: PLCSDW1-201005-201005				Units: µg/L		Analysis Date: 8/9/2022 05:59 PM		
Client ID:		Run ID: GC12_220809A				SeqNo: 8694646		Prep Date: 8/8/2022		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aldrin	0.1963	0.010	0.167	0	118	51-164	0.1668	16.2	20	
Surr: Decachlorobiphenyl	0.2065	0	0.208	0	99.3	42-148	0.1897	8.5	20	
Surr: Tetrachloro-m-xylene	0.2072	0	0.208	0	99.6	57-141	0.1993	3.85	20	

The following samples were analyzed in this batch:

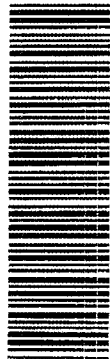
22080355-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



22080355

REPUBLICINDUSTRIAL - ROMULUS Republic Industrial and Energy Solutions, LLC
Project (REIS) F039 Leachate analysis 08.03.2022

[illegible]



ALS Holland WO# 22080355

September 08, 2022

Service Request No:E2200764

Les Arnold
ALS - Holland
3352 128th Avenue
Holland, MI 49424

Laboratory Results for: 22080355

Dear Les,

Enclosed are the results of the sample(s) submitted to our laboratory August 05, 2022
For your reference, these analyses have been assigned our service request number **E2200764**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099

PHONE +1 281 530 5656 | FAX +1 281 530 5887

ALS Group USA, Corp.
dba ALS Environmental

ALS Environmental

Client: ALS Environmental – Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request No.: E2200764
Date Received: 08/05/22

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 08/05/22.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2200380-02/03: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch.

B flags – Method Blanks

The Method Blank EQ2200380-01 contained low levels of target compounds below the Method Reporting Limit (MRL). The associated compounds in the samples are flagged with 'B' flags where the sample result is less than ten times the level detected in the method blank.

Y flags – Labeled Standards

Quantification of the native 2,3,7,8-substituted congeners is based on isotopic dilution, which automatically corrects for variation in extraction efficiency and provides accurate values even with poor recovery. Samples that had recoveries of labeled standards outside the acceptance limits are qualified with 'Y' flags on the Labeled Compound summary pages. In all cases, the signal-to-noise ratios are greater than 10:1 and detection limits were below the Method Reporting Limits.

K flags

EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration for the associated compound.

Client: ALS Environmental - Holland (MI)
Project: 22080355

Service Request:E2200764

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
E2200764-001	July 2022 F039 Analytical	8/3/2022	0000

Service Request Summary

Folder #: E2200764
Client Name: ALS Environmental - Holland (MI)
Project Name: 22080355
Project Number:

Report To: Les Arnold
ALS - Holland
3352 128th Avenue
Holland, MI 49424
USA
Phone Number: 616-738-7307
Cell Number: 616-836-2964
Fax Number: 616-399-6185
E-mail: les.arnold@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 08/05/22
Internal Due Date: 8/26/2022
QAP: LAB QAP
Qualifier Set: HRMS Qualifier Set
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: 20-2208355
EDD: BASIC_WQC_CASNo

1 500 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 10A
Pressure Gas:

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID F2200764

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:

Analyst:

Samples:

09/08/22

LKL

001

Second Level - Data Review – to be filled by person doing peer review

Date:

Analyst:

Samples:

09/08/22

SL

- 001 -



Subcontractor:
ALS Environmental - Houston HR
10450 Standcliff Rd
Suite 210
Houston, TX 77099

TEL: (713) 266-1599
FAX:
Acct #:

CHAIN-OF-CUSTODY RECORD

Date: 04-Aug-22
COC ID: 20533
Due Date: 09-Aug-22

Page 1 of 1

Salesperson		ALSHN Account	
Customer Information		Project Information	
Purchase Order	Project Name	22080355	
Work Order	Project Number	B	
Company Name	Bill To Company	ALS Group USA, Corp	
Send Report To	Inv Attn	Accounts Payable	
Address	Address	3352 128th Ave	
City/State/Zip	City/State/Zip	Holland, Michigan 49424	
Phone	Phone	(616) 399-6070	
Fax	Fax	(616) 399-6185	
eMail Address	eMail CC	les.arnold@alsglobal.com	
ALS Sample ID	Client Sample ID	Bottle	
22080355-01B	July 2022 F039 Analysis	Liquid	(1) 500AMGNEAT
Collection Date 24hr		3/Aug/2022	X
Matrix		A	B
		C	D
		E	F
		G	H
		I	J

PO 20-2208355

Blue 1.1c 12th apt 5

Comments:

Les Arnold

4 Aug 2022

Date/Time

Received by:

Date/Time

Cooler IDs

Report/QC Level

Relinquished by:

Date/Time

Received by:

Date/Time

Cooler IDs

Report/QC Level

Std



10450 Stancliff Rd., Suite 210
Houston, TX 77099
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www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sample. The COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6°C.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10°C.
- ✓ Air samples are shipped and stored cold, at 0 to 6°C
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report.

Preparation Information Benchsheet

Prep Run#: 405522
Team: Semivoa GCMS/TWOODS

Prep WorkFlow: OrgExtAq(365)
Prep Method: Method Sep Funnel/Jar

Status: Prepped
Prep Date/Time: 8/30/22 10:48

#	Lab Code	Client ID	B#	Method /Test	pH	CI	Matrix	Amt. Ext.	Sample Description
1	E2200751-001	Used Sylcia Media	.01	1613B/Dioxins Furans			Aqueous Leachate	1045mL	
2	E2200751-002	Spent Acid	.01	1613B/Dioxins Furans			Aqueous Leachate	232mL	
3	E2200757-001	COU IU Permit 0100	.02	1613B/Dioxins Furans			Water	982mL	yellow murky
4	E2200758-001	VT-680	.01	1613B/Dioxin Furans Unadjusted			Water	1024.0	brown cloudy
5	E2200758-002	EDC Process	.01	1613B/Dioxin Furans Unadjusted			Water	1020.0	clear
6	E2200758-003	T2T-07	.01	1613B/Dioxin Furans Unadjusted			Water	1004.0	yellow clear
7	E2200758-004	Biological	.01	1613B/Dioxin Furans Unadjusted			Water	1001.0	yellow clear
8	E2200758-005	Physical	.01	1613B/Dioxin Furans Unadjusted			Water	1009.0	clear yellow
9	E2200762-001	22H0066-01	.01	1613B/Dioxins Furans			Water	987mL	clear
10	E2200762-002	22H0066-02	.01	1613B/Dioxins Furans			Water	998mL	clear
11	E2200764-001	July 2022 F039 Analytical	.01	1613B/Dioxins Furans			Water	487mL	green cloudy
12	E2200782-001	BJWD-L 101	.01	1613B/Dioxins Furans			Water	883mL	
13	E2200783-002	22H0281-01	.01	1613B/Dioxins Furans			Water	988mL	
14	E2200786-001	GW1A-220808	.01	1613B/Dioxins Furans			Water	1050mL	
15	E2200786-002	GW1B-220808	.01	1613B/Dioxins Furans			Water	1053mL	
16	EQ2200380-01	MB		1613B/Dioxins Furans			Liquid	1000.0	
17	EQ2200380-02	LCS		1613B/Dioxins Furans			Liquid	1000.0	
18	EQ2200380-03	DLCS		1613B/Dioxins Furans			Liquid	1000.0	
19	K2209202-001	M22W-DXN-IN	.01	1613B/Dioxins Furans			Water	1056mL	
20	K2209202-002	M22W-DXN-EF	.01	1613B/Dioxins Furans			Water	1029mL	

Spiking Solutions

Name:	8290/1613B Cleanup Working Standard	Inventory ID	224494	Logbook Ref:	SN 8/15/22	Expires On:	02/11/2023
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E2200751-001	100.00µL	E2200751-002	100.00µL	E2200757-001	100.00µL	E2200758-001	100.00µL	E2200758-002	100.00µL	E2200758-003	100.00µL
E2200758-004	100.00µL	E2200758-005	100.00µL	E2200759-003.R	100.00µL	E2200762-001	100.00µL	E2200762-002	100.00µL	E2200764-001	100.00µL
E2200773-001.R	100.00µL	E2200782-001	100.00µL	E2200783-002	100.00µL	E2200786-001	100.00µL	E2200786-002	100.00µL	EQ2200380-01	100.00µL
EQ2200380-01	100.00µL	EQ2200380-02	100.00µL	EQ2200380-02	100.00µL	EQ2200380-03	100.00µL	EQ2200380-03	100.00µL	K2209202-001	100.00µL
K2209202-002	100.00µL										

Name:	1613B Matrix Working Standard	Inventory ID	224666	Logbook Ref:	tw 08/25/22 224666	Expires On:	02/21/2023
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EQ2200380-02	100.00µL	EQ2200380-02	100.00µL	EQ2200380-03	100.00µL
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Name:	1613B Labeled Working Standard	Inventory ID	224724	Logbook Ref:	tw 08/30/22 224724	Expires On:	02/25/2023
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E2200751-001	1,000.00µL	E2200751-002	1,000.00µL	E2200757-001	1,000.00µL	E2200758-001	1,000.00µL	E2200758-002	1,000.00µL	E2200758-003	1,000.00µL
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Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Collected: 08/03/22 00:00
Date Received: 08/05/22 09:25

Sample Name: July 2022 F039 Analytical
Lab Code: E2200764-001

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 487mL

Date Analyzed: 09/07/22 09:08
Date Extracted: 8/30/22
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P631397
Cal Ver. File Name: P631394

Data File Name: P631405
ICAL Date: 03/15/22

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	18.2	18.2			1
Total Penta-Dioxins	23.2J		5.27	51.3	1.63		1
Total Hexa-Dioxins	ND	U	3.88	51.3			1
Total Hepta-Dioxins	77.3		7.78	51.3	1.03		1
Total Tetra-Furans	461		12.0	12.0	0.70		1
Total Penta-Furans	1430		1.29	51.3	1.39		1
Total Hexa-Furans	3340		10.6	51.3	1.23		1
Total Hepta-Furans	9090		26.5	51.3	0.97		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Collected: 08/03/22 00:00
Date Received: 08/05/22 09:25

Sample Name: July 2022 F039 Analytical
Lab Code: E2200764-001

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	18.2	18.2	1	1	
1,2,3,7,8-PeCDD	ND	5.27	51.3	1	1	
1,2,3,4,7,8-HxCDD	5.05	4.17	51.3	1	0.1	0.505
1,2,3,6,7,8-HxCDD	8.18	3.72	51.3	1	0.1	0.818
1,2,3,7,8,9-HxCDD	ND	3.78	51.3	1	0.1	
1,2,3,4,6,7,8-HpCDD	69.1	7.78	51.3	1	0.01	0.691
OCDD	935	12.1	103	1	0.0003	0.281
2,3,7,8-TCDF	ND	12.0	12.0	1	0.1	
1,2,3,7,8-PeCDF	128	16.0	51.3	1	0.03	3.84
2,3,4,7,8-PeCDF	102	14.5	51.3	1	0.3	30.6
1,2,3,4,7,8-HxCDF	1150	9.57	51.3	1	0.1	115
1,2,3,6,7,8-HxCDF	389	10.2	51.3	1	0.1	38.9
1,2,3,7,8,9-HxCDF	27.8	13.6	51.3	1	0.1	2.78
2,3,4,6,7,8-HxCDF	86.5	9.69	51.3	1	0.1	8.65
1,2,3,4,6,7,8-HpCDF	8690	25.3	51.3	1	0.01	86.9
1,2,3,4,7,8,9-HpCDF	162	27.8	51.3	1	0.01	1.62
OCDF	10000	29.1	103	1	0.0003	3.00
Total TEQ						294

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2200380-01

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1000.0mL

Date Analyzed: 09/07/22 02:08
Date Extracted: 8/30/22
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P631397
Cal Ver. File Name: P631394

Data File Name: P631397
ICAL Date: 03/15/22

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	2.15	5.00			1
Total Penta-Dioxins	ND	U	0.718	25.0			1
Total Hexa-Dioxins	1.05J		0.459	25.0	1.22		1
Total Hepta-Dioxins	7.36J		0.754	25.0	1.00		1
Total Tetra-Furans	ND	U	1.21	5.00			1
Total Penta-Furans	ND	U	0.531	25.0			1
Total Hexa-Furans	3.20J		0.196	25.0	1.11		1
Total Hepta-Furans	ND	U	0.241	25.0			1



Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2200380-02

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1000.0mL

Date Analyzed: 09/07/22 23:47
Date Extracted: 8/30/22
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI

Data File Name: P631422
ICAL Date: 03/15/22

Blank File Name: P631397
Cal Ver. File Name: P631409

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	155		1.36	5.00	0.74	1.001	1
1,2,3,7,8-PeCDD	888		0.303	25.0	1.61	1.001	1
1,2,3,4,7,8-HxCDD	911		0.202	25.0	1.25	1.000	1
1,2,3,6,7,8-HxCDD	806		0.179	25.0	1.25	1.000	1
1,2,3,7,8,9-HxCDD	855		0.182	25.0	1.27	1.007	1
1,2,3,4,6,7,8-HpCDD	852		0.486	25.0	1.01	1.000	1
OCDD	1810		4.73	50.0	0.85	1.000	1
2,3,7,8-TCDF	161		0.755	5.00	0.76	1.001	1
1,2,3,7,8-PeCDF	810		0.425	25.0	1.54	1.000	1
2,3,4,7,8-PeCDF	777		0.383	25.0	1.50	1.001	1
1,2,3,4,7,8-HxCDF	798		0.172	25.0	1.23	1.000	1
1,2,3,6,7,8-HxCDF	885		0.192	25.0	1.22	1.000	1
1,2,3,7,8,9-HxCDF	892		0.230	25.0	1.24	1.000	1
2,3,4,6,7,8-HxCDF	755		0.163	25.0	1.22	1.000	1
1,2,3,4,6,7,8-HpCDF	895		2.56	25.0	1.02	1.000	1
1,2,3,4,7,8,9-HpCDF	841		3.10	25.0	1.01	1.000	1
OCDF	1600		0.919	50.0	0.87	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2200380-02

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1000.0mL

Date Analyzed: 09/07/22 23:47
Date Extracted: 8/30/22
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P631397
Cal Ver. File Name: P631409

Data File Name: P631422
ICAL Date: 03/15/22

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1537.702	77		25-164	0.78	1.027
13C-1,2,3,7,8-PeCDD	2000	1503.480	75		25-181	1.61	1.229
13C-1,2,3,4,7,8-HxCDD	2000	1426.277	71		32-141	1.24	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1666.673	83		28-130	1.23	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1446.605	72		23-140	1.02	1.070
13C-OCDD	4000	3180.611	80		17-157	0.90	1.142
13C-2,3,7,8-TCDF	2000	1309.811	65		24-169	0.77	0.991
13C-1,2,3,7,8-PeCDF	2000	1552.696	78		24-185	1.59	1.179
13C-2,3,4,7,8-PeCDF	2000	1634.619	82		21-178	1.54	1.218
13C-1,2,3,4,7,8-HxCDF	2000	1441.682	72		26-152	0.52	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1357.737	68		26-123	0.51	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1250.420	63		29-147	0.50	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1630.246	82		28-136	0.50	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1271.697	64		28-143	0.43	1.045
13C-1,2,3,4,7,8,9-HpCDF	2000	1301.178	65		26-138	0.43	1.082
37Cl-2,3,7,8-TCDD	800	575.969	72		35-197	NA	1.028

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2200380-03

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1000.0mL

Date Analyzed: 09/07/22 10:48
Date Extracted: 8/30/22
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P631397
Cal Ver. File Name: P631394

Data File Name: P631407
ICAL Date: 03/15/22

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	151		3.14	5.00	0.79		1
Total Penta-Dioxins	893		0.554	25.0	1.58		1
Total Hexa-Dioxins	2570		0.219	25.0	1.27		1
Total Hepta-Dioxins	871		0.606	25.0	1.03		1
Total Tetra-Furans	162		1.23	5.00	0.74		1
Total Penta-Furans	1590		0.560	25.0	1.61		1
Total Hexa-Furans	3290		0.239	25.0	1.24		1
Total Hepta-Furans	1730		2.51	25.0	1.02		1



09-Sep-2022

Rick Sauve
Republic Industrial and Energy Solutions, LLC
28470 Cintrin Dr.
Romulus, MI 48174

Re: **(REIS) F039 Leachate analysis 08.03.2022**

Work Order: **22080355**

Dear Rick,

ALS Environmental received 1 sample on 03-Aug-2022 10:00 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 44.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Les Arnold

Les Arnold
General Manager

Report of Laboratory Analysis

Certificate No: MN 026-999-449

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Client: Republic Industrial and Energy Solutions, LLC**Project:** (REIS) F039 Leachate analysis 08.03.2022**Work Order:** 22080355**Work Order Sample Summary**

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
22080355-01	July 2022 F039 Analysis	Liquid		8/3/2022	8/3/2022 22:00	<input type="checkbox"/>

Client: Republic Industrial and Energy Solutions, LLC

Project: (REIS) F039 Leachate analysis 08.03.2022

Work Order: 22080355

Case Narrative

Subcontracted analytical data has been appended to this report in its entirety.

ALS Group, USA

Date: 09-Sep-2022

Client: Republic Industrial and Energy Solutions, LLC

Project: (REIS) F039 Leachate analysis 08.03.2022

Work Order: 22080355

Sample ID: July 2022 F039 Analysis

Lab ID: 22080355-01

Collection Date: 8/3/2022

Matrix: LIQUID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PESTICIDES			SW8081B		Prep: SW3511 8/8/22 17:34	Analyst: MMO
Aldrin	ND		0.12	µg/L	1	8/9/2022 08:45 PM
SEMI-VOLATILE ORGANIC COMPOUNDS			SW846 8270D		Prep: SW3510 8/9/22 14:52	Analyst: EEW
N-Nitrosodimethylamine	ND		100	µg/L	10	8/10/2022 12:03 AM
SUBCONTRACTED ANALYSES			SUBCONTRACT			Analyst: ALS
Subcontracted Analyses	See attached		as noted		1	9/9/2022

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Republic Industrial and Energy Solutions, LLC
Project: (REIS) F039 Leachate analysis 08.03.2022
WorkOrder: 22080355

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Analyte accreditation is not offered
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<u>Units Reported</u>	<u>Description</u>
µg/L	Micrograms per Liter
as noted	

ALS Group, USA

Date: 09-Sep-22

Client: Republic Industrial and Energy Solutions, LLC
Work Order: 22080355
Project: (REIS) F039 Leachate analysis 08.03.2022

QC BATCH REPORT

Batch ID: **201005** Instrument ID **GC12** Method: **SW8081B**

MBLK	Sample ID: PBLKW1-201005-201005				Units: µg/L		Analysis Date: 8/9/2022 05:17 PM			
Client ID:	Run ID: GC12_220809A				SeqNo: 8694643		Prep Date: 8/8/2022		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aldrin	ND	0.010								
Surr: Decachlorobiphenyl	0.2035	0	0.208	0	97.8	42-148	0			
Surr: Tetrachloro-m-xylene	0.1943	0	0.208	0	93.4	57-141	0			

LCS	Sample ID: PLCSW1-201005-201005				Units: µg/L		Analysis Date: 8/9/2022 05:45 PM			
Client ID:	Run ID: GC12_220809A				SeqNo: 8694645		Prep Date: 8/8/2022		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aldrin	0.1668	0.010	0.167	0	99.9	51-164	0			
Surr: Decachlorobiphenyl	0.1897	0	0.208	0	91.2	42-148	0			
Surr: Tetrachloro-m-xylene	0.1993	0	0.208	0	95.8	57-141	0			

LCSD	Sample ID: PLCSDW1-201005-201005				Units: µg/L		Analysis Date: 8/9/2022 05:59 PM			
Client ID:	Run ID: GC12_220809A				SeqNo: 8694646		Prep Date: 8/8/2022		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aldrin	0.1963	0.010	0.167	0	118	51-164	0.1668	16.2	20	
Surr: Decachlorobiphenyl	0.2065	0	0.208	0	99.3	42-148	0.1897	8.5	20	
Surr: Tetrachloro-m-xylene	0.2072	0	0.208	0	99.6	57-141	0.1993	3.85	20	

The following samples were analyzed in this batch: 22080355-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Republic Industrial and Energy Solutions, LLC
 Work Order: 22080355
 Project: (REIS) F039 Leachate analysis 08.03.2022

QC BATCH REPORT

Batch ID: 201058 Instrument ID SVMS10 Method: SW846 8270D

MBLK	Sample ID: SBLKW1-201058-201058				Units: µg/L		Analysis Date: 8/9/2022 03:23 PM			
Client ID:	Run ID: SVMS10_220809A				SeqNo: 8696204		Prep Date: 8/9/2022		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
N-Nitrosodimethylamine	ND	5.0								
Surr: 2,4,6-Tribromophenol	33.37	0	50	0	66.7	47-103	0			
Surr: 2-Fluorobiphenyl	29.31	0	50	0	58.6	41-96	0			
Surr: 2-Fluorophenol	20.28	0	50	0	40.6	28-66	0			
Surr: 4-Terphenyl-d14	39.27	0	50	0	78.5	49-107	0			
Surr: Nitrobenzene-d5	30.73	0	50	0	61.5	41-95	0			
Surr: Phenol-d6	12.75	0	50	0	25.5	18-44	0			

LCS	Sample ID: SLCSW1-201058-201058				Units: µg/L		Analysis Date: 8/9/2022 03:50 PM			
Client ID:	Run ID: SVMS10_220809A				SeqNo: 8696205		Prep Date: 8/9/2022		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
N-Nitrosodimethylamine	8.82	5.0	20	0	44.1	26-74	0			
Surr: 2,4,6-Tribromophenol	35.8	0	50	0	71.6	47-103	0			
Surr: 2-Fluorobiphenyl	28.91	0	50	0	57.8	41-96	0			
Surr: 2-Fluorophenol	20.63	0	50	0	41.3	28-66	0			
Surr: 4-Terphenyl-d14	38.9	0	50	0	77.8	49-107	0			
Surr: Nitrobenzene-d5	29.72	0	50	0	59.4	41-95	0			
Surr: Phenol-d6	13.32	0	50	0	26.6	18-44	0			

LCSD	Sample ID: SLCSDW1-201058-201058				Units: µg/L		Analysis Date: 8/9/2022 04:18 PM			
Client ID:	Run ID: SVMS10_220809A				SeqNo: 8696206		Prep Date: 8/9/2022		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
N-Nitrosodimethylamine	9.5	5.0	20	0	47.5	26-74	8.82	7.42	30	
Surr: 2,4,6-Tribromophenol	34.24	0	50	0	68.5	47-103	35.8	4.45	40	
Surr: 2-Fluorobiphenyl	29.06	0	50	0	58.1	41-96	28.91	0.518	40	
Surr: 2-Fluorophenol	22.14	0	50	0	44.3	28-66	20.63	7.06	40	
Surr: 4-Terphenyl-d14	37.8	0	50	0	75.6	49-107	38.9	2.87	40	
Surr: Nitrobenzene-d5	30.56	0	50	0	61.1	41-95	29.72	2.79	40	
Surr: Phenol-d6	14.15	0	50	0	28.3	18-44	13.32	6.04	40	

The following samples were analyzed in this batch: 22080355-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

22080355

Project: (REIS) F039 Leachate analysis 08.03.2022



Chain of Custody Form

Page 1 of 1[illegible]

Sample Receipt Checklist

Client Name: **REPULCINDUSTRIAL - ROMULU**

Date/Time Received: **03-Aug-22 22:00**

Work Order: **22080355**

Received by: **LYS**

Checklist completed by **Lydia Sweet**

04-Aug-22

Reviewed by: **Les Arnold**

04-Aug-22

eSignature

Date

eSignature

Date

Matrices: **Liquid**

Carrier name: **Courier**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Sample(s) received on ice?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

4.6/5.6c

IR3

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage:

8/4/2022 8:07:39 AM

Water - VOA vials have zero headspace?

Yes ☐

No ☐

No VOA vials submitted ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

pH adjusted?

Yes ☐

No ☐

N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



ALS Holland WO# 22080355

September 08, 2022

Service Request No:E2200764

Les Arnold
ALS - Holland
3352 128th Avenue
Holland, MI 49424

Laboratory Results for: 22080355

Dear Les,

Enclosed are the results of the sample(s) submitted to our laboratory August 05, 2022
For your reference, these analyses have been assigned our service request number **E2200764**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental



Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client: ALS Environmental – Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request No.: E2200764
Date Received: 08/05/22

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 08/05/22.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2200380-02/03: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch.

B flags – Method Blanks

The Method Blank EQ2200380-01 contained low levels of target compounds below the Method Reporting Limit (MRL). The associated compounds in the samples are flagged with 'B' flags where the sample result is less than ten times the level detected in the method blank.

Y flags – Labeled Standards

Quantification of the native 2,3,7,8-substituted congeners is based on isotopic dilution, which automatically corrects for variation in extraction efficiency and provides accurate values even with poor recovery. Samples that had recoveries of labeled standards outside the acceptance limits are qualified with 'Y' flags on the Labeled Compound summary pages. In all cases, the signal-to-noise ratios are greater than 10:1 and detection limits were below the Method Reporting Limits.

K flags

EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration for the associated compound.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

The TEQ Summary results for each sample have been calculated by ALS/Houston to include:

- WHO-2005 TEFs, The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds (M. Van den Berg et al., Toxicological Sciences 93(2):223-241, 2006)
- Non-detected compounds are not included in the 'Total'

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - Holland (MI)
Project: 22080355

Service Request:E2200764

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
E2200764-001	July 2022 F039 Analytical	8/3/2022	0000

Service Request Summary

1 500 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 10A
Pressure Gas:

Folder #: E2200764
Client Name: ALS Environmental - Holland (MI)
Project Name: 22080355
Project Number:
Report To: Les Arnold
ALS - Holland
3352 128th Avenue
Holland, MI 49424
USA
Phone Number: 616-738-7307
Cell Number: 616-836-2964
Fax Number: 616-399-6185
E-mail: les.arnold@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 08/05/22
Internal Due Date: 8/26/2022
QAP: LAB QAP
Qualifier Set: HRMS Qualifier Set
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: 20-2208355
EDD: BASIC_WQC_CASNo

Lab Samp No.	Client Samp No	Matrix	Collected	Dioxins Furans/1613B
E2200764-001	July 2022 F039 Analytical	Water	08/03/22 0000	II

Service Request Summary

1 500 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 10A
Pressure Gas:

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 08/05/22
Internal Due Date: 8/26/2022
QAP: LAB QAP
Qualifier Set: HRMS Qualifier Set
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: 20-2208355
EDD: BASIC_WQC_CASNo

Folder #: E2200764
Client Name: ALS Environmental - Holland (MI)
Project Name: 22080355
Project Number:
Report To: Les Arnold
ALS - Holland
3352 128th Avenue
Holland, MI 49424
USA
Phone Number: 616-738-7307
Cell Number: 616-836-2964
Fax Number: 616-399-6185
E-mail: les.arnold@alsglobal.com

Data Qualifiers

HRMS Qualifier Set

- B Indicates the associated analyte was found in the method blank at >1/10th the reported value.
- E Estimated value. The reported concentration is above the calibration range of the instrument.
- H Sample extracted and/or analyzed out of suggested holding time.
- J Estimated value. The reported concentration is below the MRL.
- K The ion abundance ratio between the primary and secondary ions were outside of theoretical acceptance limits. The concentration of this analyte should be considered as an estimate.
- P Chlorodiphenyl ether interference was present at the retention time of the target analyte. Reported result should be considered an estimate.
- Q Monitored lock-mass indicates matrix-interference. Reported result is estimated.
- S Signal saturated detector. Result reported from dilution.
- U Compound was analyzed for, but was not detected (ND).
- X See Case Narrative.
- Y Isotopically Labeled Standard recovery outside of acceptance limits. In all cases, the signal-to-noise ratios are greater than 10:1, making the recoveries acceptable.
 - i The MDL/MRL have been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCetration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Arizona Department of Health Services	AZ0793	5/27/2023
Arkansas Department of Environmental Quality	22-041-0	3/27/2023
California Department of Health Services	2919-2023	4/30/2023
Department of Defense	L22-90	3/31/2024
Florida Department of Health	E87611-36	6/30/2023
Florida Department of Health	E87611-36	6/30/2023
Florida Department of Health	E87611-36	6/30/2023
Florida Department of Health	E87611-36	6/30/2023
Hawaii Department of Health	2022	4/30/2023
Illinois Environmental Protection Agency	2000322022-9	5/9/2023
Kansas Department of Health and Environment	E-10352 2022-2023	7/31/2023
Louisiana Department of Environmental Quality	03087-2022	6/30/2023
Louisiana Department of Health and Hospitals	LA028	12/31/2022
Maine Department of Health and Human Services	2022017	6/5/2024
Maryland Department of the Environment	343	6/30/2023
Michigan Department of Environmental Quality	9971-2022	4/30/2023
Minnesota Department of Health	2228443	12/31/2022
Nebraska Department of Health and Human Services	NE-OS-25-13	4/30/2023
Nevada Department of Conservation and Natural Resources	TX026932023-1	7/31/2023
New Hampshire Environmental Laboratory Accreditation Program	209422	4/24/2023
New Jersey Department of Environmental Protection	TX008-2023	6/30/2023
New York Department of Health	11707	3/31/2023
Oklahoma Department of Environmental Quality	2022-141	8/31/2023
Oregon Environmental Laboratory Accreditation Program	TX200002	5/15/2023
Pennsylvania Department of Environmental Protection	68-03441-016	6/30/2023
Perry Johnson Laboratory Accreditation	L22-91	3/31/2024
Tennessee Department of Environment and Conservation	04016-2022	4/30/2023
Texas Commission on Environmental Quality	T104704231-22-29	4/30/2023
United States Department of Agriculture	P330-19-00299	10/10/2022
Utah Department of Health Environmental Laboratory Certification	TX026932022-13	7/31/2023
Washington Department of Health	C819-2022	11/14/2022

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID F2200764

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
09/08/22	LKL	001

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
09/08/22	SL	- 001 -



Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com



Subcontractor:
ALS Environmental - Houston HR
10450 Standliff Rd
Suite 210
Houston, TX 77099

TEL: (713) 266-1599
FAX:
Acct #:

CHAIN-OF-CUSTODY RECORD

Date: 04-Aug-22
COC ID: 20533
Due Date: 09-Aug-22

Page 1 of 1

Customer Information		ALS/HN Account		Project Information		Parameter/Method Request for Analysis													
Purchase Order	Project Name	Project Name	Project Number	Project Name	Project Number	A 1613 - Client list attached.													
Work Order	Company Name	ALS Group USA, Corp	Bill To Company	ALS Group USA, Corp	Accounts Payable														
Send Report To	Inv Alt	Les Arnold	Address	3352 128th Ave															
Address	City/State/Zip	Holland, Michigan 49424	Phone	(616) 399-6070	Fax	(616) 399-6185													
City/State/Zip	City/State/Zip	Holland, Michigan 49424	Phone	(616) 399-6070	Fax	(616) 399-6185													
Phone	City/State/Zip	Holland, Michigan 49424	Phone	(616) 399-6070	Fax	(616) 399-6185													
Fax	City/State/Zip	Holland, Michigan 49424	Phone	(616) 399-6070	Fax	(616) 399-6185													
eMail Address	City/State/Zip	Holland, Michigan 49424	Phone	(616) 399-6070	Fax	(616) 399-6185													
ALS Sample ID	Client Sample ID	Matrix	Collection Date 24hr	Bottle															
22080355-01B	July 2022 F039 Analysis	Liquid	3/Aug/2022	(1) 500AMGNEAT	X														
						A	B	C	D	E	F	G	H	I	J				

PO 20-2208355

Comments:

Blue 1.1c (12.7) CPT-15

Les Arnold

4 Aug 2022

Date/Time

Received by:

Date/Time

Cooler IDs

Report/QC Level

Std

Relinquished by:

Date/Time

Received by:

Date/Time



Cooler Receipt Form

Project Chemist 14

Client/Project ALS

Thermometer ID 1251

Date/Time Received: 8/5/22

Initials: PM

Date/Time Logged in: 8/5/22 Initials 14

1. Method of delivery: ☐ US Mail ☒ Fed Ex ☐ UPS ☐ DHL ☐ Courier ☐ Client

2. Samples received in: ☒ Cooler ☐ Box ☐ Envelope ☐ Other

3. Were custody seals on coolers? ☐ Yes ☒ No

If yes, how many and where?

Were they intact? ☐ Yes ☐ No ☒ N/A

Were they signed and dated? ☐ Yes ☐ No ☒ N/A

4. Packing Material: ☐ Inserts ☒ Baggage ☒ Bubble Wrap ☐ Gel Packs ☒ Wet Ice ☐ Sleeves ☐ Other

5. Foreign or Regulated Soil? ☐ Yes ☐ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
5551 4487 2897		8/5/22	0925	PM	1.6	<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

6. Were custody papers properly filled out (ink, signed, dated, etc)? ☒ Yes ☐ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ☒ Yes ☐ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ☒ Yes ☐ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ☒ Yes ☐ No

10. Did sample labels and tags agree with custody documents? ☒ Yes ☐ No

Notes, Discrepancies, & Resolutions:

Service request Label:

HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS



10450 Stancliff Rd., Suite 210
Houston, TX 77099
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F: +1 713 266 1599
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SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sample. The COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6°C.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10°C.
- ✓ Air samples are shipped and stored cold, at 0 to 6°C
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report



Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 405522
Team: Semivoa GCMS/TWOODS

Prep WorkFlow: OrgExtAq(365)
Prep Method: Method Sep Funnel/Jar

Status: Prepped
Prep Date/Time: 8/30/22 10:48

#	Lab Code	Client ID	B#	Method /Test	pH	CI	Matrix	Amt. Ext.	Sample Description
1	E2200751-001	Used Sylica Media	.01	1613B/Dioxins Furans			Aqueous Leachate	1045mL	
2	E2200751-002	Spent Acid	.01	1613B/Dioxins Furans			Aqueous Leachate	232mL	
3	E2200757-001	COU IU Permit 0100	.02	1613B/Dioxins Furans			Water	982mL	yellow murky
4	E2200758-001	VT-680	.01	1613B/Dioxin Furans Unadjusted			Water	1024.0	brown cloudy
5	E2200758-002	EDC Process	.01	1613B/Dioxin Furans Unadjusted			Water	1020.0	clear
6	E2200758-003	T2T-07	.01	1613B/Dioxin Furans Unadjusted			Water	1004.0	yellow clear
7	E2200758-004	Biological	.01	1613B/Dioxin Furans Unadjusted			Water	1001.0	yellow clear
8	E2200758-005	Physical	.01	1613B/Dioxin Furans Unadjusted			Water	1009.0	clear yellow
9	E2200762-001	22H0066-01	.01	1613B/Dioxins Furans			Water	987mL	clear
10	E2200762-002	22H0066-02	.01	1613B/Dioxins Furans			Water	998mL	clear
11	E2200764-001	July 2022 F039 Analytical	.01	1613B/Dioxins Furans			Water	487mL	green cloudy
12	E2200782-001	BJWD-L 101	.01	1613B/Dioxins Furans			Water	883mL	
13	E2200783-002	22H0281-01	.01	1613B/Dioxins Furans			Water	988mL	
14	E2200786-001	GW1A-220808	.01	1613B/Dioxins Furans			Water	1050mL	
15	E2200786-002	GW1B-220808	.01	1613B/Dioxins Furans			Water	1053mL	
16	EQ2200380-01	MB		1613B/Dioxins Furans			Liquid	1000.0	
17	EQ2200380-02	LCS		1613B/Dioxins Furans			Liquid	1000.0	
18	EQ2200380-03	DLCS		1613B/Dioxins Furans			Liquid	1000.0	
19	K2209202-001	M22W-DXN-IN	.01	1613B/Dioxins Furans			Water	1056mL	
20	K2209202-002	M22W-DXN-EF	.01	1613B/Dioxins Furans			Water	1029mL	

Spiking Solutions

Name:	8290/1613B Cleanup Working Standard	Inventory ID	224494	Logbook Ref:	SN 8/15/22	Expires On:	02/11/2023
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E2200751-001	100.00µL	E2200751-002	100.00µL	E2200757-001	100.00µL	E2200758-001	100.00µL	E2200758-002	100.00µL	E2200758-003	100.00µL
E2200758-004	100.00µL	E2200758-005	100.00µL	E2200759-003.R	100.00µL	E2200762-001	100.00µL	E2200762-002	100.00µL	E2200764-001	100.00µL
E2200773-001.R	100.00µL	E2200782-001	100.00µL	E2200783-002	100.00µL	E2200786-001	100.00µL	E2200786-002	100.00µL	EQ2200380-01	100.00µL
EQ2200380-01	100.00µL	EQ2200380-02	100.00µL	EQ2200380-02	100.00µL	EQ2200380-03	100.00µL	EQ2200380-03	100.00µL	K2209202-001	100.00µL
K2209202-002	100.00µL										

Name:	1613B Matrix Working Standard	Inventory ID	224666	Logbook Ref:	tw 08/25/22 224666	Expires On:	02/21/2023
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EQ2200380-02	100.00µL	EQ2200380-02	100.00µL	EQ2200380-03	100.00µL	EQ2200380-03	100.00µL
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Name:	1613B Labeled Working Standard	Inventory ID	224724	Logbook Ref:	tw 08/30/22 224724	Expires On:	02/25/2023
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E2200751-001	1,000.00µL	E2200751-002	1,000.00µL	E2200757-001	1,000.00µL	E2200758-001	1,000.00µL	E2200758-002	1,000.00µL	E2200758-003	1,000.00µL
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Preparation Information Benchsheet

Prep Run#: 405522

Team: Semivoa GCMS/TWOODS

Prep WorkFlow: OrgExtAq(365)

Prep Method: Method Sep Funnel/Jar

Status: Prepped

Prep Date/Time: 8/30/22 10:48

E2200758-004	1,000.00µL	E2200758-005	1,000.00µL	E2200759-003 R	1,000.00µL	E2200762-001	1,000.00µL	E2200762-002	1,000.00µL	E2200764-001	1,000.00µL
E2200773-001 R	1,000.00µL	E2200782-001	1,000.00µL	E2200783-002	1,000.00µL	E2200786-001	1,000.00µL	E2200786-002	1,000.00µL	EQ2200380-01	1,000.00µL
EQ2200380-01	1,000.00µL	EQ2200380-02	1,000.00µL	EQ2200380-02	1,000.00µL	EQ2200380-03	1,000.00µL	EQ2200380-03	1,000.00µL	K2209202-001	1,000.00µL
K2209202-002	1,000.00µL										

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	8/30/22 10:48	Started:	9/1/22 10:00	Started:	9/1/22 13:00	Started:	9/2/22 09:00
Finished:	8/30/22 16:00	Finished:	9/1/22 11:00	Finished:	9/1/22 16:00	Finished:	9/2/22 12:00
By:	TWOODS	By:	TWOODS	By:	TWOODS	By:	TWOODS
Comments	Comments	Comments	Comments	Comments	Comments	Comments	Comments

Comments:

Reviewed By: TW Date: 08/30/22

Chain of Custody

Relinquished By:

Received By:

Date:

Extracts Examined
Yes No



Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Collected: 08/03/22 00:00
Date Received: 08/05/22 09:25

Sample Name: July 2022 F039 Analytical
Lab Code: E2200764-001

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 487mL

Date Analyzed: 09/07/22 09:08
Date Extracted: 8/30/22
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P631397
Cal Ver. File Name: P631394

Data File Name: P631405
ICAL Date: 03/15/22

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	18.2	18.2			1
1,2,3,7,8-PeCDD	ND	U	5.27	51.3			1
1,2,3,4,7,8-HxCDD	5.05	BJK	4.17	51.3	1.01	1.000	1
1,2,3,6,7,8-HxCDD	8.18	JK	3.72	51.3	0.94	1.000	1
1,2,3,7,8,9-HxCDD	ND	U	3.78	51.3			1
1,2,3,4,6,7,8-HpCDD	69.1		7.78	51.3	1.03	1.000	1
OCDD	935		12.1	103	0.99	1.000	1
2,3,7,8-TCDF	ND	U	12.0	12.0			1
1,2,3,7,8-PeCDF	128		16.0	51.3	1.60	1.001	1
2,3,4,7,8-PeCDF	102		14.5	51.3	1.47	1.000	1
1,2,3,4,7,8-HxCDF	1150		9.57	51.3	1.22	1.000	1
1,2,3,6,7,8-HxCDF	389		10.2	51.3	1.22	1.000	1
1,2,3,7,8,9-HxCDF	27.8	JK	13.6	51.3	0.69	1.001	1
2,3,4,6,7,8-HxCDF	86.5	K	9.69	51.3	1.01	1.000	1
1,2,3,4,6,7,8-HpCDF	8690		25.3	51.3	0.97	1.000	1
1,2,3,4,7,8,9-HpCDF	162		27.8	51.3	1.05	1.000	1
OCDF	10000		29.1	103	0.86	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Collected: 08/03/22 00:00
Date Received: 08/05/22 09:25

Sample Name: July 2022 F039 Analytical
Lab Code: E2200764-001

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 487mL

Date Analyzed: 09/07/22 09:08
Date Extracted: 8/30/22
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P631397
Cal Ver. File Name: P631394

Data File Name: P631405
ICAL Date: 03/15/22

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	18.2	18.2			1
Total Penta-Dioxins	23.2J		5.27	51.3	1.63		1
Total Hexa-Dioxins	ND	U	3.88	51.3			1
Total Hepta-Dioxins	77.3		7.78	51.3	1.03		1
Total Tetra-Furans	461		12.0	12.0	0.70		1
Total Penta-Furans	1430		1.29	51.3	1.39		1
Total Hexa-Furans	3340		10.6	51.3	1.23		1
Total Hepta-Furans	9090		26.5	51.3	0.97		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Collected: 08/03/22 00:00
Date Received: 08/05/22 09:25

Sample Name: July 2022 F039 Analytical
Lab Code: E2200764-001

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 487mL

Date Analyzed: 09/07/22 09:08
Date Extracted: 8/30/22
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P631397
Cal Ver. File Name: P631394

Data File Name: P631405
ICAL Date: 03/15/22

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	373.741	19	Y	25-164	0.79	1.027
13C-1,2,3,7,8-PeCDD	2000	339.725	17	Y	25-181	1.60	1.229
13C-1,2,3,4,7,8-HxCDD	2000	333.650	17	Y	32-141	1.26	0.991
13C-1,2,3,6,7,8-HxCDD	2000	376.253	19	Y	28-130	1.25	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	328.248	16	Y	23-140	1.07	1.070
13C-OCDD	4000	579.458	14	Y	17-157	0.90	1.142
13C-2,3,7,8-TCDF	2000	336.878	17	Y	24-169	0.80	0.990
13C-1,2,3,7,8-PeCDF	2000	352.606	18	Y	24-185	1.63	1.178
13C-2,3,4,7,8-PeCDF	2000	358.505	18	Y	21-178	1.62	1.218
13C-1,2,3,4,7,8-HxCDF	2000	359.852	18	Y	26-152	0.50	0.968
13C-1,2,3,6,7,8-HxCDF	2000	336.080	17	Y	26-123	0.50	0.972
13C-1,2,3,7,8,9-HxCDF	2000	302.821	15	Y	29-147	0.50	1.008
13C-2,3,4,6,7,8-HxCDF	2000	375.122	19	Y	28-136	0.50	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	270.309	14	Y	28-143	0.40	1.045
13C-1,2,3,4,7,8,9-HpCDF	2000	312.286	16	Y	26-138	0.42	1.082
37Cl-2,3,7,8-TCDD	800	392.414	49		35-197	NA	1.028

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Collected: 08/03/22 00:00
Date Received: 08/05/22 09:25

Sample Name: July 2022 F039 Analytical
Lab Code: E2200764-001

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	18.2	18.2	1	1	
1,2,3,7,8-PeCDD	ND	5.27	51.3	1	1	
1,2,3,4,7,8-HxCDD	5.05	4.17	51.3	1	0.1	0.505
1,2,3,6,7,8-HxCDD	8.18	3.72	51.3	1	0.1	0.818
1,2,3,7,8,9-HxCDD	ND	3.78	51.3	1	0.1	
1,2,3,4,6,7,8-HpCDD	69.1	7.78	51.3	1	0.01	0.691
OCDD	935	12.1	103	1	0.0003	0.281
2,3,7,8-TCDF	ND	12.0	12.0	1	0.1	
1,2,3,7,8-PeCDF	128	16.0	51.3	1	0.03	3.84
2,3,4,7,8-PeCDF	102	14.5	51.3	1	0.3	30.6
1,2,3,4,7,8-HxCDF	1150	9.57	51.3	1	0.1	115
1,2,3,6,7,8-HxCDF	389	10.2	51.3	1	0.1	38.9
1,2,3,7,8,9-HxCDF	27.8	13.6	51.3	1	0.1	2.78
2,3,4,6,7,8-HxCDF	86.5	9.69	51.3	1	0.1	8.65
1,2,3,4,6,7,8-HpCDF	8690	25.3	51.3	1	0.01	86.9
1,2,3,4,7,8,9-HpCDF	162	27.8	51.3	1	0.01	1.62
OCDF	10000	29.1	103	1	0.0003	3.00
Total TEQ						294

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2200380-01

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1000.0mL

Date Analyzed: 09/07/22 02:08
Date Extracted: 8/30/22
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P631397
Cal Ver. File Name: P631394

Data File Name: P631397
ICAL Date: 03/15/22

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	2.15	5.00			1
1,2,3,7,8-PeCDD	ND	U	0.718	25.0			1
1,2,3,4,7,8-HxCDD	1.05J		0.487	25.0	1.22	1.000	1
1,2,3,6,7,8-HxCDD	0.758JK		0.448	25.0	0.58	1.000	1
1,2,3,7,8,9-HxCDD	0.539JK		0.448	25.0	0.50	1.007	1
1,2,3,4,6,7,8-HpCDD	5.37JK		0.754	25.0	0.82	1.000	1
OCDD	55.5		0.360	50.0	0.78	1.000	1
2,3,7,8-TCDF	ND	U	1.21	5.00			1
1,2,3,7,8-PeCDF	ND	U	0.564	25.0			1
2,3,4,7,8-PeCDF	ND	U	0.500	25.0			1
1,2,3,4,7,8-HxCDF	1.59J		0.183	25.0	1.11	1.000	1
1,2,3,6,7,8-HxCDF	0.670JK		0.198	25.0	2.09	1.000	1
1,2,3,7,8,9-HxCDF	1.61J		0.256	25.0	1.13	1.001	1
2,3,4,6,7,8-HxCDF	0.523JK		0.165	25.0	2.69	1.000	1
1,2,3,4,6,7,8-HpCDF	1.66JK		0.223	25.0	0.64	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.262	25.0			1
OCDF	4.78JK		1.32	50.0	1.48	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2200380-01

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1000.0mL

Date Analyzed: 09/07/22 02:08
Date Extracted: 8/30/22
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P631397
Cal Ver. File Name: P631394

Data File Name: P631397
ICAL Date: 03/15/22

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	2.15	5.00			1
Total Penta-Dioxins	ND	U	0.718	25.0			1
Total Hexa-Dioxins	1.05J		0.459	25.0	1.22		1
Total Hepta-Dioxins	7.36J		0.754	25.0	1.00		1
Total Tetra-Furans	ND	U	1.21	5.00			1
Total Penta-Furans	ND	U	0.531	25.0			1
Total Hexa-Furans	3.20J		0.196	25.0	1.11		1
Total Hepta-Furans	ND	U	0.241	25.0			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2200380-01

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1000.0mL

Date Analyzed: 09/07/22 02:08
Date Extracted: 8/30/22
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P631397
Cal Ver. File Name: P631394

Data File Name: P631397
ICAL Date: 03/15/22

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1065.797	53		25-164	0.80	1.027
13C-1,2,3,7,8-PeCDD	2000	1032.483	52		25-181	1.60	1.229
13C-1,2,3,4,7,8-HxCDD	2000	1188.804	59		32-141	1.28	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1449.161	72		28-130	1.25	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1188.663	59		23-140	1.02	1.070
13C-OCDD	4000	2180.366	55		17-157	0.87	1.142
13C-2,3,7,8-TCDF	2000	958.365	48		24-169	0.76	0.990
13C-1,2,3,7,8-PeCDF	2000	1081.684	54		24-185	1.59	1.178
13C-2,3,4,7,8-PeCDF	2000	1154.834	58		21-178	1.57	1.218
13C-1,2,3,4,7,8-HxCDF	2000	1234.398	62		26-152	0.52	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1139.729	57		26-123	0.51	0.972
13C-1,2,3,7,8,9-HxCDF	2000	1073.897	54		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1408.901	70		28-136	0.51	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	970.321	49		28-143	0.43	1.045
13C-1,2,3,4,7,8,9-HpCDF	2000	1049.213	52		26-138	0.42	1.082
37Cl-2,3,7,8-TCDD	800	360.257	45		35-197	NA	1.028



Accuracy & Precision

ALS Environmental - Houston HRMS
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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Analyzed: 09/07/22
Date Extracted: 08/30/22

Duplicate Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar

Units: pg/L
Basis: NA
Analysis Lot: 776754

Lab Control Sample
EQ2200380-02

Duplicate Lab Control Sample
EQ2200380-03

Analyte Name	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,2,3,4,6,7,8-HpCDD	852	1000	85	871	1000	87	70-140	2	50
1,2,3,4,7,8-HxCDD	911	1000	91	908	1000	91	70-164	<1	50
1,2,3,6,7,8-HxCDD	806	1000	81	801	1000	80	76-134	<1	50
1,2,3,7,8,9-HxCDD	855	1000	86	861	1000	86	64-162	<1	50
1,2,3,7,8-PeCDD	888	1000	89	893	1000	89	70-142	<1	50
2,3,7,8-TCDD	155	200	77	151	200	76	67-158	2	50
OCDD	1810	2000	91	1830	2000	91	78-144	<1	50
1,2,3,4,6,7,8-HpCDF	895	1000	89	900	1000	90	82-122	<1	50
1,2,3,4,7,8,9-HpCDF	841	1000	84	826	1000	83	78-138	2	50
1,2,3,4,7,8-HxCDF	798	1000	80	806	1000	81	72-134	<1	50
1,2,3,6,7,8-HxCDF	885	1000	88	898	1000	90	84-130	1	50
1,2,3,7,8,9-HxCDF	892	1000	89	847	1000	85	78-130	5	50
1,2,3,7,8-PeCDF	810	1000	81	807	1000	81	80-134	<1	50
2,3,4,6,7,8-HxCDF	755	1000	76	735	1000	74	70-156	3	50
2,3,4,7,8-PeCDF	777	1000	78	784	1000	78	68-160	<1	50
2,3,7,8-TCDF	161	200	80	162	200	81	75-158	<1	50
OCDF	1600	2000	80	1650	2000	83	63-170	3	50

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2200380-02

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1000.0mL

Date Analyzed: 09/07/22 23:47
Date Extracted: 8/30/22
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI

Data File Name: P631422
ICAL Date: 03/15/22

Blank File Name: P631397
Cal Ver. File Name: P631409

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	155		1.36	5.00	0.74	1.001	1
1,2,3,7,8-PeCDD	888		0.303	25.0	1.61	1.001	1
1,2,3,4,7,8-HxCDD	911		0.202	25.0	1.25	1.000	1
1,2,3,6,7,8-HxCDD	806		0.179	25.0	1.25	1.000	1
1,2,3,7,8,9-HxCDD	855		0.182	25.0	1.27	1.007	1
1,2,3,4,6,7,8-HpCDD	852		0.486	25.0	1.01	1.000	1
OCDD	1810		4.73	50.0	0.85	1.000	1
2,3,7,8-TCDF	161		0.755	5.00	0.76	1.001	1
1,2,3,7,8-PeCDF	810		0.425	25.0	1.54	1.000	1
2,3,4,7,8-PeCDF	777		0.383	25.0	1.50	1.001	1
1,2,3,4,7,8-HxCDF	798		0.172	25.0	1.23	1.000	1
1,2,3,6,7,8-HxCDF	885		0.192	25.0	1.22	1.000	1
1,2,3,7,8,9-HxCDF	892		0.230	25.0	1.24	1.000	1
2,3,4,6,7,8-HxCDF	755		0.163	25.0	1.22	1.000	1
1,2,3,4,6,7,8-HpCDF	895		2.56	25.0	1.02	1.000	1
1,2,3,4,7,8,9-HpCDF	841		3.10	25.0	1.01	1.000	1
OCDF	1600		0.919	50.0	0.87	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2200380-02

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1000.0mL

Date Analyzed: 09/07/22 23:47
Date Extracted: 8/30/22
Instrument Name: E-HRMS-08

Data File Name: P631422
ICAL Date: 03/15/22

GC Column: DB-5MSUI
Blank File Name: P631397
Cal Ver. File Name: P631409

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	155		1.36	5.00	0.74		1
Total Penta-Dioxins	888		0.303	25.0	1.61		1
Total Hexa-Dioxins	2570		0.187	25.0	1.25		1
Total Hepta-Dioxins	852		0.486	25.0	1.01		1
Total Tetra-Furans	161		0.755	5.00	0.83		1
Total Penta-Furans	1590		0.403	25.0	1.54		1
Total Hexa-Furans	3330		0.186	25.0	1.23		1
Total Hepta-Furans	1740		2.80	25.0	1.02		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2200380-02

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1000.0mL

Date Analyzed: 09/07/22 23:47
Date Extracted: 8/30/22
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI

Data File Name: P631422
ICAL Date: 03/15/22

Blank File Name: P631397
Cal Ver. File Name: P631409

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1537.702	77		25-164	0.78	1.027
13C-1,2,3,7,8-PeCDD	2000	1503.480	75		25-181	1.61	1.229
13C-1,2,3,4,7,8-HxCDD	2000	1426.277	71		32-141	1.24	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1666.673	83		28-130	1.23	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1446.605	72		23-140	1.02	1.070
13C-OCDD	4000	3180.611	80		17-157	0.90	1.142
13C-2,3,7,8-TCDF	2000	1309.811	65		24-169	0.77	0.991
13C-1,2,3,7,8-PeCDF	2000	1552.696	78		24-185	1.59	1.179
13C-2,3,4,7,8-PeCDF	2000	1634.619	82		21-178	1.54	1.218
13C-1,2,3,4,7,8-HxCDF	2000	1441.682	72		26-152	0.52	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1357.737	68		26-123	0.51	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1250.420	63		29-147	0.50	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1630.246	82		28-136	0.50	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1271.697	64		28-143	0.43	1.045
13C-1,2,3,4,7,8,9-HpCDF	2000	1301.178	65		26-138	0.43	1.082
37Cl-2,3,7,8-TCDD	800	575.969	72		35-197	NA	1.028

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2200380-03

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1000.0mL

Date Analyzed: 09/07/22 10:48
Date Extracted: 8/30/22
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P631397
Cal Ver. File Name: P631394

Data File Name: P631407
ICAL Date: 03/15/22

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	151		3.14	5.00	0.79	1.001	1
1,2,3,7,8-PeCDD	893		0.554	25.0	1.58	1.001	1
1,2,3,4,7,8-HxCDD	908		0.237	25.0	1.27	1.000	1
1,2,3,6,7,8-HxCDD	801		0.210	25.0	1.26	1.000	1
1,2,3,7,8,9-HxCDD	861		0.213	25.0	1.22	1.008	1
1,2,3,4,6,7,8-HpCDD	871		0.606	25.0	1.03	1.000	1
OCDD	1830		5.37	50.0	0.88	1.000	1
2,3,7,8-TCDF	162		1.23	5.00	0.75	1.001	1
1,2,3,7,8-PeCDF	807		0.591	25.0	1.61	1.001	1
2,3,4,7,8-PeCDF	784		0.531	25.0	1.56	1.000	1
1,2,3,4,7,8-HxCDF	806		0.229	25.0	1.24	1.000	1
1,2,3,6,7,8-HxCDF	898		0.246	25.0	1.24	1.000	1
1,2,3,7,8,9-HxCDF	847		0.300	25.0	1.17	1.000	1
2,3,4,6,7,8-HxCDF	735		0.198	25.0	1.23	1.000	1
1,2,3,4,6,7,8-HpCDF	900		2.28	25.0	1.02	1.000	1
1,2,3,4,7,8,9-HpCDF	826		2.77	25.0	1.04	1.000	1
OCDF	1650		1.01	50.0	0.88	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2200380-03

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1000.0mL

Date Analyzed: 09/07/22 10:48
Date Extracted: 8/30/22
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P631397
Cal Ver. File Name: P631394

Data File Name: P631407
ICAL Date: 03/15/22

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	151		3.14	5.00	0.79		1
Total Penta-Dioxins	893		0.554	25.0	1.58		1
Total Hexa-Dioxins	2570		0.219	25.0	1.27		1
Total Hepta-Dioxins	871		0.606	25.0	1.03		1
Total Tetra-Furans	162		1.23	5.00	0.74		1
Total Penta-Furans	1590		0.560	25.0	1.61		1
Total Hexa-Furans	3290		0.239	25.0	1.24		1
Total Hepta-Furans	1730		2.51	25.0	1.02		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - Holland (MI)
Project: 22080355
Sample Matrix: Water

Service Request: E2200764
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2200380-03

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Sep Funnel/Jar
Sample Amount: 1000.0mL

Date Analyzed: 09/07/22 10:48
Date Extracted: 8/30/22
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P631397
Cal Ver. File Name: P631394

Data File Name: P631407
ICAL Date: 03/15/22

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1456.983	73		25-164	0.80	1.027
13C-1,2,3,7,8-PeCDD	2000	1415.007	71		25-181	1.57	1.228
13C-1,2,3,4,7,8-HxCDD	2000	1383.593	69		32-141	1.24	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1734.048	87		28-130	1.22	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1506.665	75		23-140	1.03	1.070
13C-OCDD	4000	3416.355	85		17-157	0.87	1.142
13C-2,3,7,8-TCDF	2000	1272.673	64		24-169	0.76	0.990
13C-1,2,3,7,8-PeCDF	2000	1449.176	72		24-185	1.60	1.178
13C-2,3,4,7,8-PeCDF	2000	1527.886	76		21-178	1.55	1.218
13C-1,2,3,4,7,8-HxCDF	2000	1436.117	72		26-152	0.50	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1343.325	67		26-123	0.51	0.972
13C-1,2,3,7,8,9-HxCDF	2000	1319.645	66		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1670.525	84		28-136	0.51	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	1288.653	64		28-143	0.44	1.045
13C-1,2,3,4,7,8,9-HpCDF	2000	1360.108	68		26-138	0.42	1.082
37Cl-2,3,7,8-TCDD	800	552.663	69		35-197	NA	1.028