



**REPUBLIC**  
SERVICES

28470 Citrin Drive Romulus, MI 48174  
o 734.946.1000 republicservices.com

February 15, 2023

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 Seventh 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 December 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 January 3<sup>rd</sup>, 2023. Analyses were not received by RIES until February 13<sup>th</sup>, 2023. This report is submitted as timely as possible upon 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 December

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
<b>MI-163-1W-C010 , Well #1-12</b>			
Current Month	434,008	0	434,008
Since facility first injected			50,759,040
<b>MI-163-1W-C011, Well #2-12</b>			
Current Month	515,856	0	515,856
Since facility first injected			30,877,403
		Lifetime Combined	81,636,443

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 108

$$\begin{aligned} & \underline{108} \text{ lifetime number of months of injection} \times 43,830 \text{ minutes/month} \\ & \qquad \qquad \qquad = \underline{4,733,640} \text{ minutes of injection} \end{aligned}$$

$$\begin{aligned} \text{Lifetime combined injected volume} & \underline{81,636,443} \div \underline{4,733,640} \text{ minutes of injection} \\ & = \underline{17.25} \text{ gpm average injection rate} \end{aligned}$$

**WELL 1 DATA**



Injection Well 1, December 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
12/1/2022	99.5	940.1	23.6	23.6	859.0	1217.0	5.6	8.3	0.0	40.8	194.5	752.7
12/2/2022	102.0	940.4	23.5	23.6	843.0	1202.8	4.0	8.1	0.0	40.2	172.0	773.1
12/3/2022	134.1	173.8	23.5	23.7	842.2	877.9	7.8	7.9	0.0	0.0	669.5	743.7
12/4/2022	128.2	134.4	23.5	23.6	877.4	878.9	7.6	7.8	0.0	0.0	743.1	749.9
12/5/2022	101.5	939.7	23.5	23.6	876.5	1,154.6	6.0	8.7	0.0	40.1	151.1	773.1
12/6/2022	99.9	941.8	23.6	23.7	841.3	1,174.9	5.7	8.1	0.0	39.8	215.4	748.5
12/7/2022	92.3	940.2	23.6	23.7	846.0	1,154.8	6.3	9.2	0.0	39.7	167.2	769.0
12/8/2022	98.3	247.4	23.5	23.7	828.6	866.3	7.8	8.0	0.0	0.0	618.6	752.2
12/9/2022	92.7	98.6	23.5	23.6	850.1	852.5	7.7	7.8	0.0	0.0	751.5	759.1
12/10/2022	30.1	942.2	23.5	23.5	817.3	1,140.8	6.9	8.4	0.0	39.7	163.7	819.9
12/11/2022	90.1	97.6	23.5	23.5	832.0	843.9	7.1	7.1	0.0	0.0	734.5	753.6
12/12/2022	66.1	940.5	23.5	23.6	842.4	1,137.3	6.9	8.6	0.0	39.6	163.4	769.7
12/13/2022	107.8	940.5	23.5	23.6	824.6	1,143.2	7.1	8.8	0.0	39.9	192.6	728.6
12/14/2022	100.3	941.9	23.5	23.6	824.4	1,150.8	6.5	8.4	0.0	40.5	200.3	722.8
12/15/2022	100.9	939.8	23.5	23.6	824.8	1,161.0	6.8	8.3	0.0	40.8	205.9	724.2
12/16/2022	103.7	940.1	23.5	23.6	825.3	1,154.6	6.2	8.4	0.0	40.2	174.7	718.1
12/17/2022	123.2	941.0	23.5	23.6	791.8	1,136.3	0.4	9.3	0.0	51.8	163.9	700.1
12/18/2022	136.1	145.4	23.4	23.5	821.1	834.0	6.7	7.2	0.0	0.0	675.8	697.7
12/19/2022	130.3	941.1	22.0	23.5	832.7	1,341.3	2.0	8.4	0.0	49.4	150.2	707.4
12/20/2022	114.6	940.4	22.7	22.8	970.5	1,305.9	4.6	10.2	0.0	39.5	333.5	863.5
12/21/2022	107.2	940.0	22.7	22.8	978.3	1,292.7	3.3	8.0	0.0	40.3	278.0	866.2
12/22/2022	127.9	940.5	22.7	22.8	947.5	1,251.6	4.3	7.9	0.0	40.9	253.0	825.9
12/23/2022	82.4	941.1	22.6	22.8	934.7	1,243.0	5.8	8.7	0.0	38.9	263.7	854.2
12/24/2022	112.2	278.1	22.6	22.6	942.9	992.0	7.4	7.7	0.0	0.0	713.4	845.9
12/25/2022	106.3	113.2	22.6	22.6	955.6	958.9	7.3	7.4	0.0	0.0	844.3	850.5
12/26/2022	101.9	106.7	22.6	22.6	950.6	956.6	7.3	7.3	0.0	0.0	848.4	850.7
12/27/2022	93.1	939.7	22.6	22.7	949.0	1232.2	7.0	8.3	0.0	38.8	216.9	872.0
12/28/2022	102.4	940.2	22.7	22.8	892.2	1209.8	6.9	8.4	0.0	39.3	242.4	799.5
12/29/2022	113.0	940.2	22.7	22.9	894.6	1203.8	6.8	8.1	0.0	39.4	238.3	784.5
12/30/2022	112.1	940.1	22.9	22.9	868.6	1193.8	6.8	7.8	0.0	39.6	192.1	782.8
12/31/2022	108.2	129.7	22.8	22.9	868.6	906.2	7.3	7.4	0.0	0.0	739.3	797.8

## Circle Chart Index

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

### Chart Recorder #1

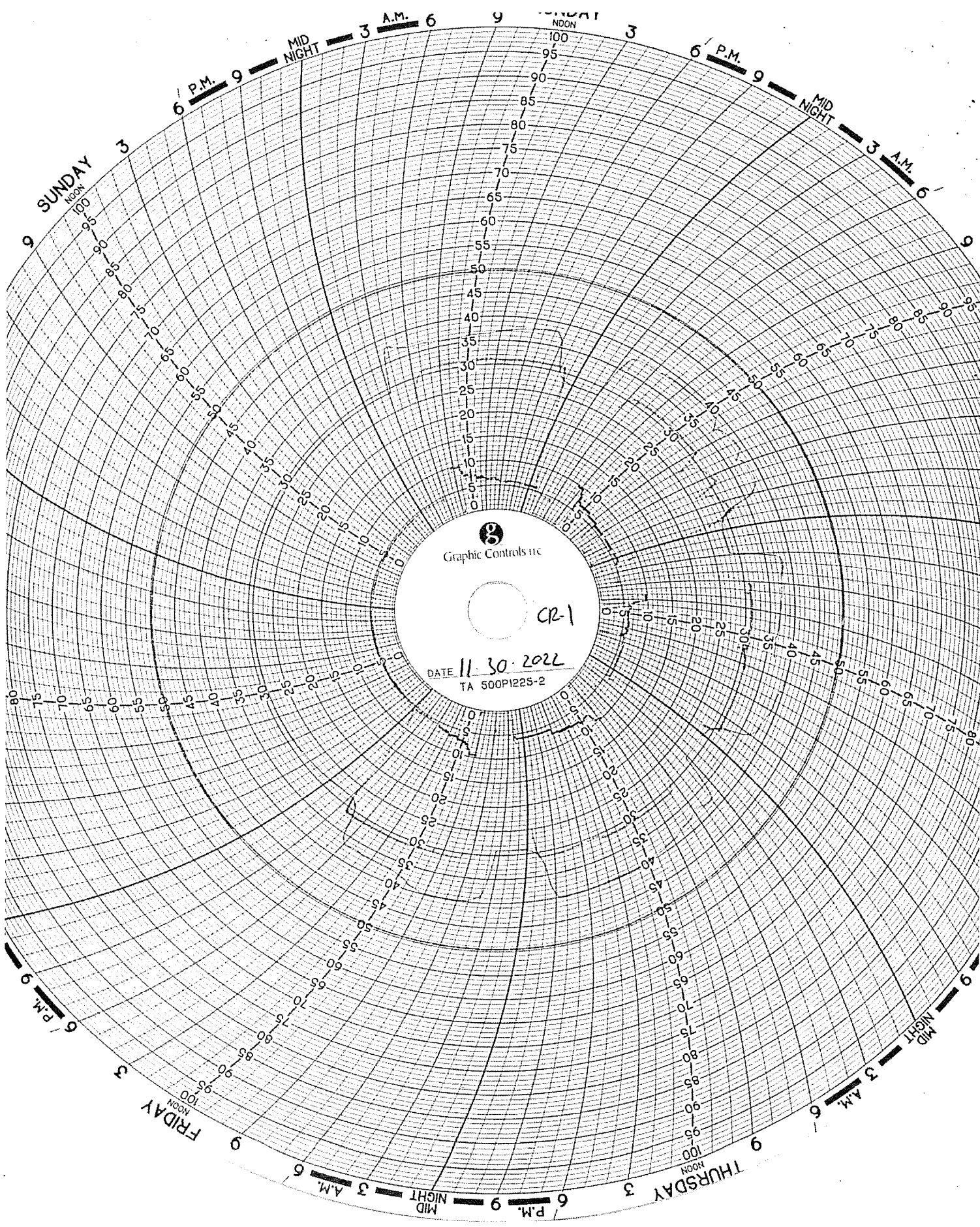
- Channel #1
  - Blue Pen - Well 1 Injection Pressure (chart value x 30)**
- Channel #2
  - Red Pen – Well 1 Annulus Pressure (chart value x 30)**
- Channel #3
  - Green Pen – Well 1 Flow Rate (chart value x 4)**
- Channel #4
  - Black Pen – Well 1 Annulus Tank Level (chart value x 0)**

### 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

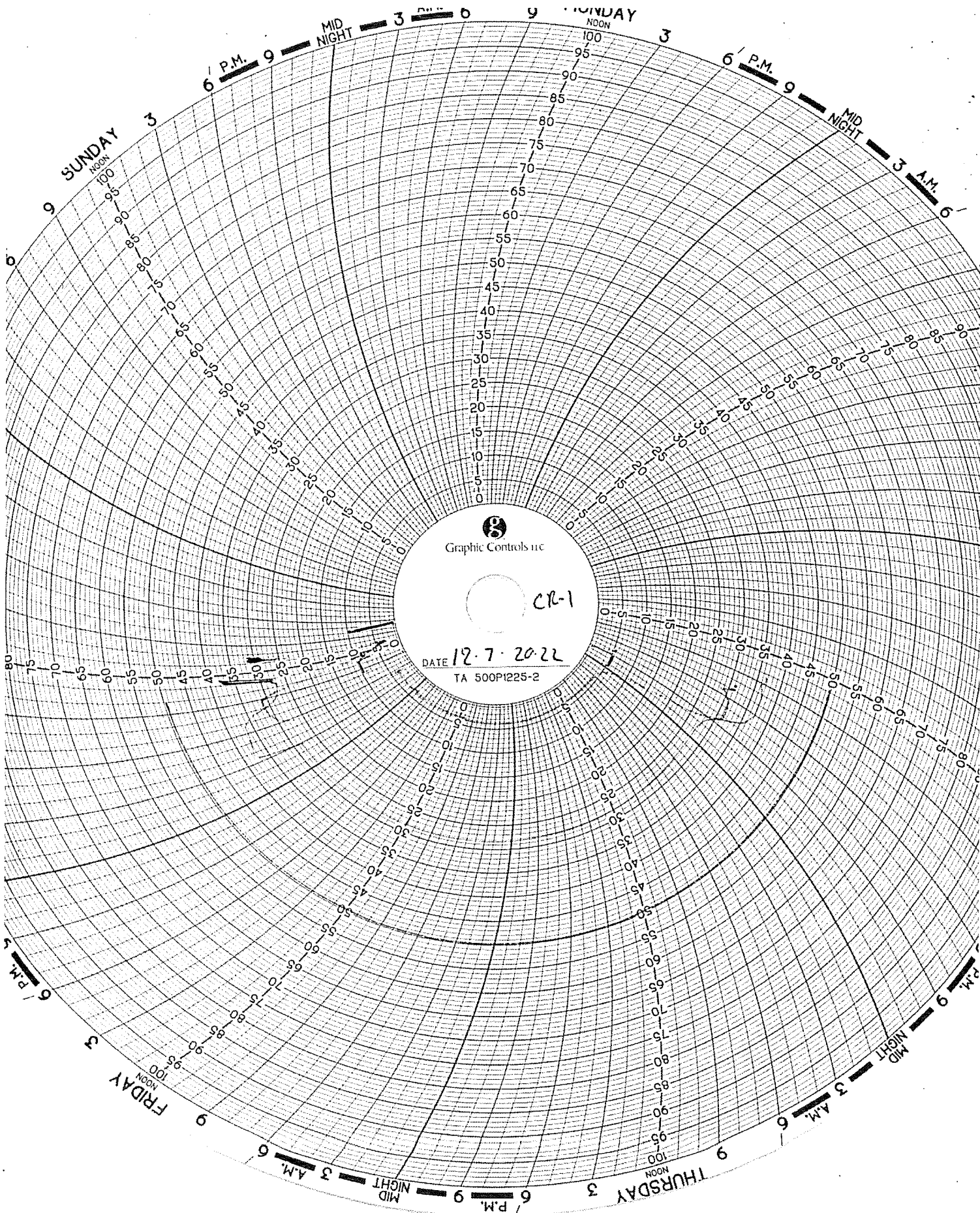
- Channel #1
  - Blue Pen – Injection pH Well 1 & 2 (chart value + 3.3)**
- Channel #2
  - Red Pen – Well 1 Monthly Volume (chart value x 100,000)**
- Channel #3
  - Green Pen – Well 2 Monthly Volume (chart value x 100,000)**
- Channel #4
  - Black Pen – Temperature (chart value x 0)**



Graphic Controls inc

CR-1

DATE 11.30.2022  
TA 500PI22S-2



Graphic Controls inc

CR-1

DATE 12-7-2022  
TA 500PI225-2

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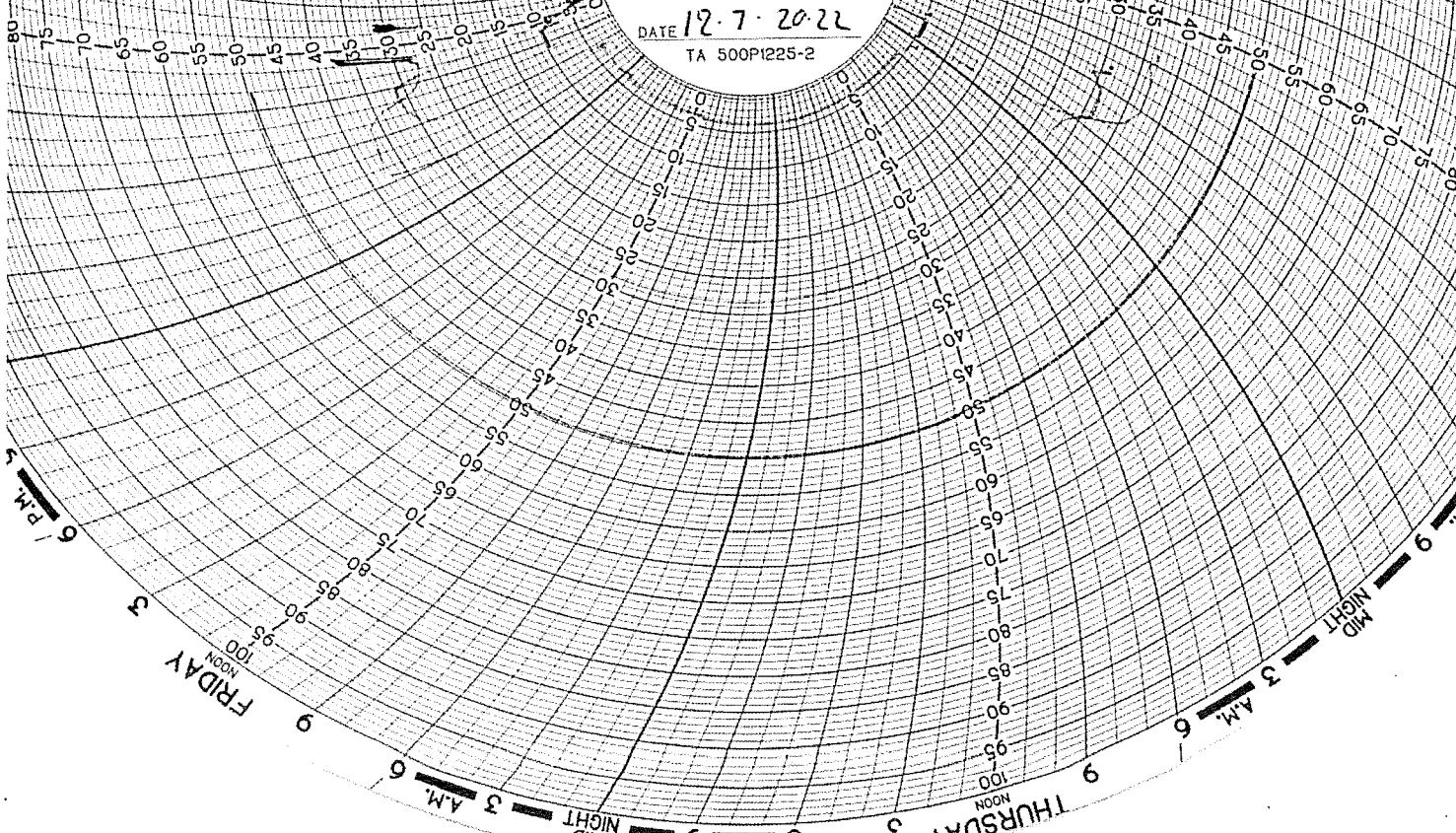
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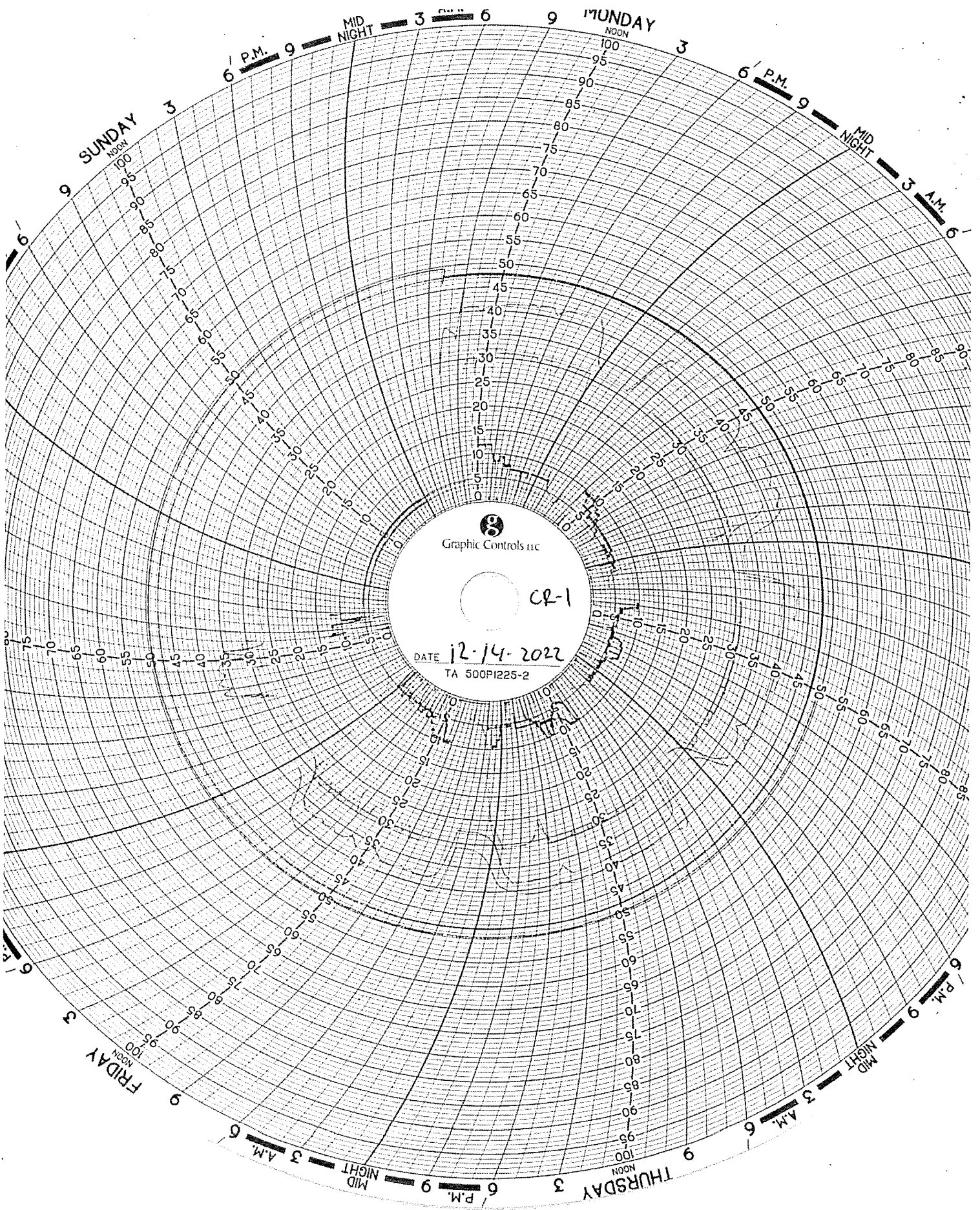
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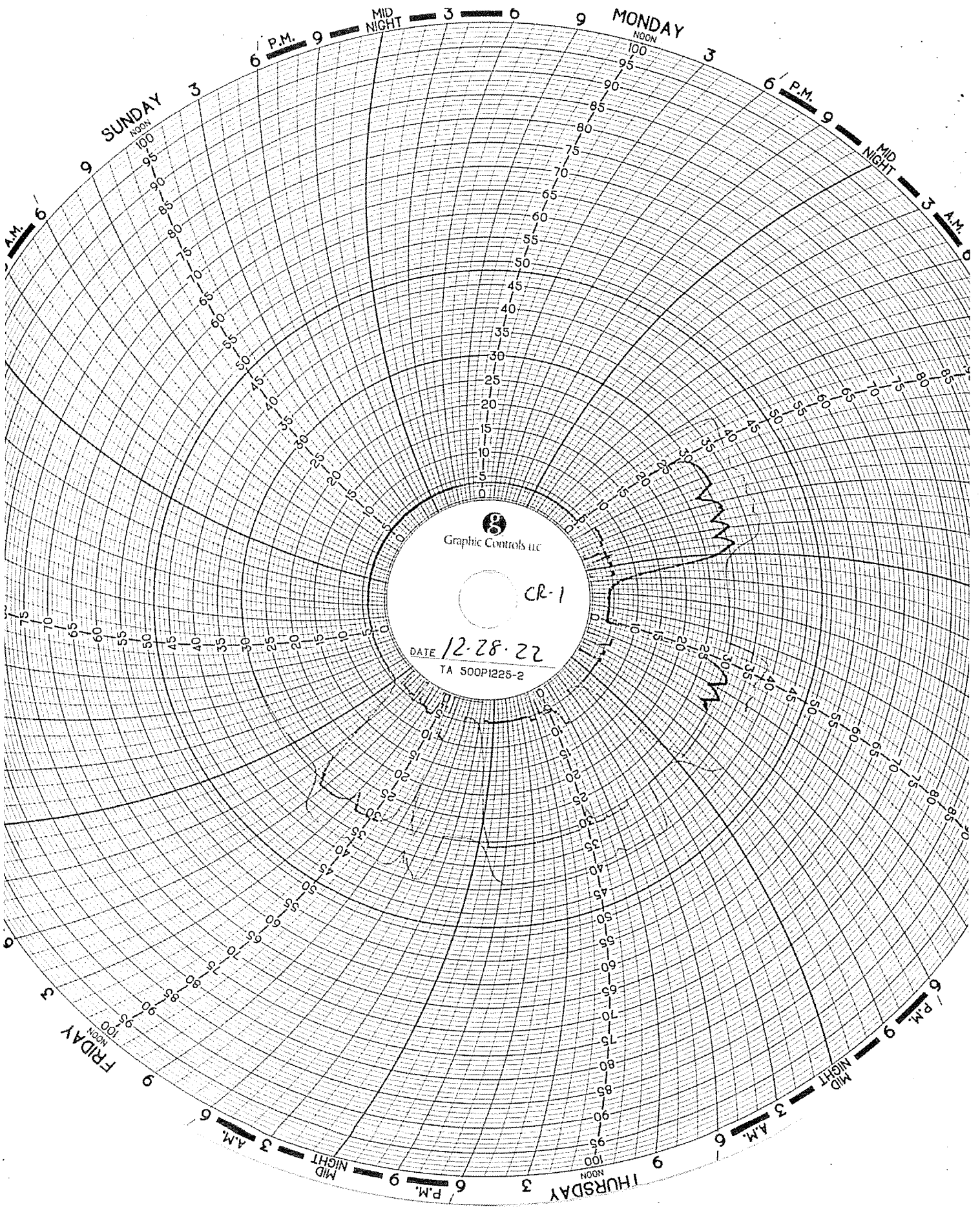
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Graphic Controls LLC

CR-1

DATE 12-28-22

TA 500P1225-2

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**WELL 2 DATA**



**Injection Well 2, December 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
12/1/2022	133.7	940.2	31.3	31.4	902.4	1264.3	5.6	8.3	0.0	43.7	231.5	776.6
12/2/2022	134.2	946.5	31.3	31.4	886.7	1253.3	4.0	8.1	0.0	43.2	215.2	795.7
12/3/2022	140.9	194.4	31.3	31.4	886.4	933.2	7.8	7.9	0.0	0.0	692.4	792.2
12/4/2022	130.1	141.4	31.2	31.3	932.9	936.9	7.6	7.8	0.0	0.0	791.6	806.4
12/5/2022	113.6	940.1	31.2	31.4	936.4	1,212.4	6.0	8.7	0.0	43.9	198.0	825.9
12/6/2022	123.8	945.6	31.4	31.4	899.1	1,232.5	5.7	8.1	0.0	43.7	272.5	781.0
12/7/2022	136.5	945.3	31.4	31.4	906.2	1,204.2	6.3	9.2	0.0	43.3	220.8	774.6
12/8/2022	103.7	293.5	31.3	31.4	887.7	936.4	7.8	8.0	0.0	0.0	642.8	812.6
12/9/2022	94.5	104.0	31.3	31.3	916.1	921.3	7.7	7.8	0.0	0.0	812.1	826.6
12/10/2022	85.5	941.0	31.2	31.3	877.6	1,189.7	6.9	8.4	0.0	54.9	222.5	838.1
12/11/2022	90.0	101.3	31.3	31.3	901.2	919.5	7.1	7.1	0.0	0.0	799.9	829.2
12/12/2022	87.2	941.7	31.3	31.3	918.9	1,212.4	6.9	8.6	0.0	46.6	246.1	831.9
12/13/2022	125.2	941.4	31.3	31.3	899.1	1,221.8	7.1	8.7	0.0	44.9	266.5	777.3
12/14/2022	133.8	945.3	31.3	31.3	903.5	1,230.5	6.5	8.4	0.0	43.5	276.2	772.4
12/15/2022	127.3	939.7	31.3	31.4	906.3	1,240.3	6.8	8.3	0.0	44.4	285.5	780.3
12/16/2022	129.9	944.1	31.3	31.4	909.7	1,235.3	6.2	8.4	0.0	44.1	247.8	781.8
12/17/2022	135.1	932.2	31.3	31.4	853.8	1,199.3	0.4	9.3	0.0	56.7	249.6	774.2
12/18/2022	138.8	154.2	31.2	31.3	904.9	920.7	6.7	7.2	0.0	0.0	750.9	781.8
12/19/2022	135.5	944.1	31.2	31.2	920.2	1,185.5	2.0	8.4	0.0	51.5	201.8	785.9
12/20/2022	138.6	949.4	31.2	31.3	882.4	1,219.7	4.6	10.2	0.0	41.4	243.4	754.1
12/21/2022	135.7	944.9	31.2	31.3	895.6	1,197.0	3.3	8.0	0.0	42.2	193.3	762.8
12/22/2022	150.1	951.6	31.2	31.3	869.0	1,159.4	4.3	7.9	0.0	42.0	170.0	723.3
12/23/2022	104.3	947.2	31.1	31.3	861.5	1,165.2	5.8	8.7	0.0	40.4	182.9	756.8
12/24/2022	117.8	337.6	31.0	31.1	874.8	939.5	7.4	7.7	0.0	0.0	602.2	780.0
12/25/2022	108.1	118.4	31.0	31.0	897.4	903.6	7.3	7.4	0.0	0.0	779.3	795.4
12/26/2022	102.2	108.7	31.0	31.1	903.1	905.9	7.3	7.3	0.0	0.0	794.4	803.6
12/27/2022	86.9	947.6	31.0	31.2	905.2	1165.5	6.8	8.3	0.0	41.5	155.0	821.6
12/28/2022	128.3	941.2	31.2	31.3	856.3	1149.1	6.9	8.4	0.0	40.7	193.1	737.2
12/29/2022	134.1	948.3	31.3	31.4	860.0	1148.1	6.8	8.1	0.0	41.1	187.0	729.0
12/30/2022	139.2	944.3	30.6	31.5	858.3	1273.9	6.8	7.8	0.0	41.3	146.0	751.9
12/31/2022	116.0	317.1	30.6	30.7	1021.2	1069.1	7.3	7.4	0.0	0.0	752.0	950.2

## 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

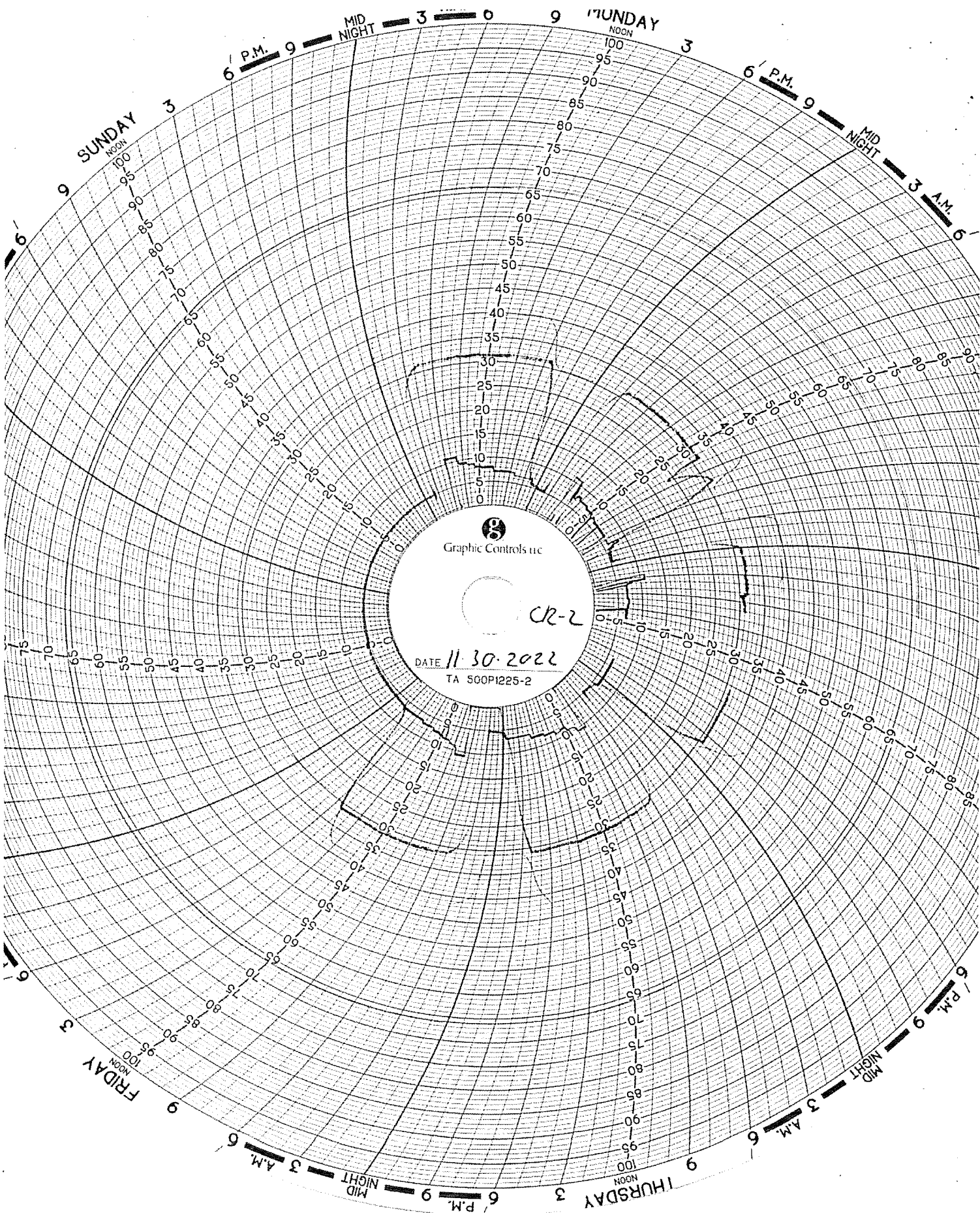
**Red Pen** - Well 1 Monthly Volume (chart value x 100,000)

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-2

DATE 11 30 2022  
TA 500P1225-2

SUNDAY  
NOON

MONDAY  
NOON

FRIDAY  
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THURSDAY  
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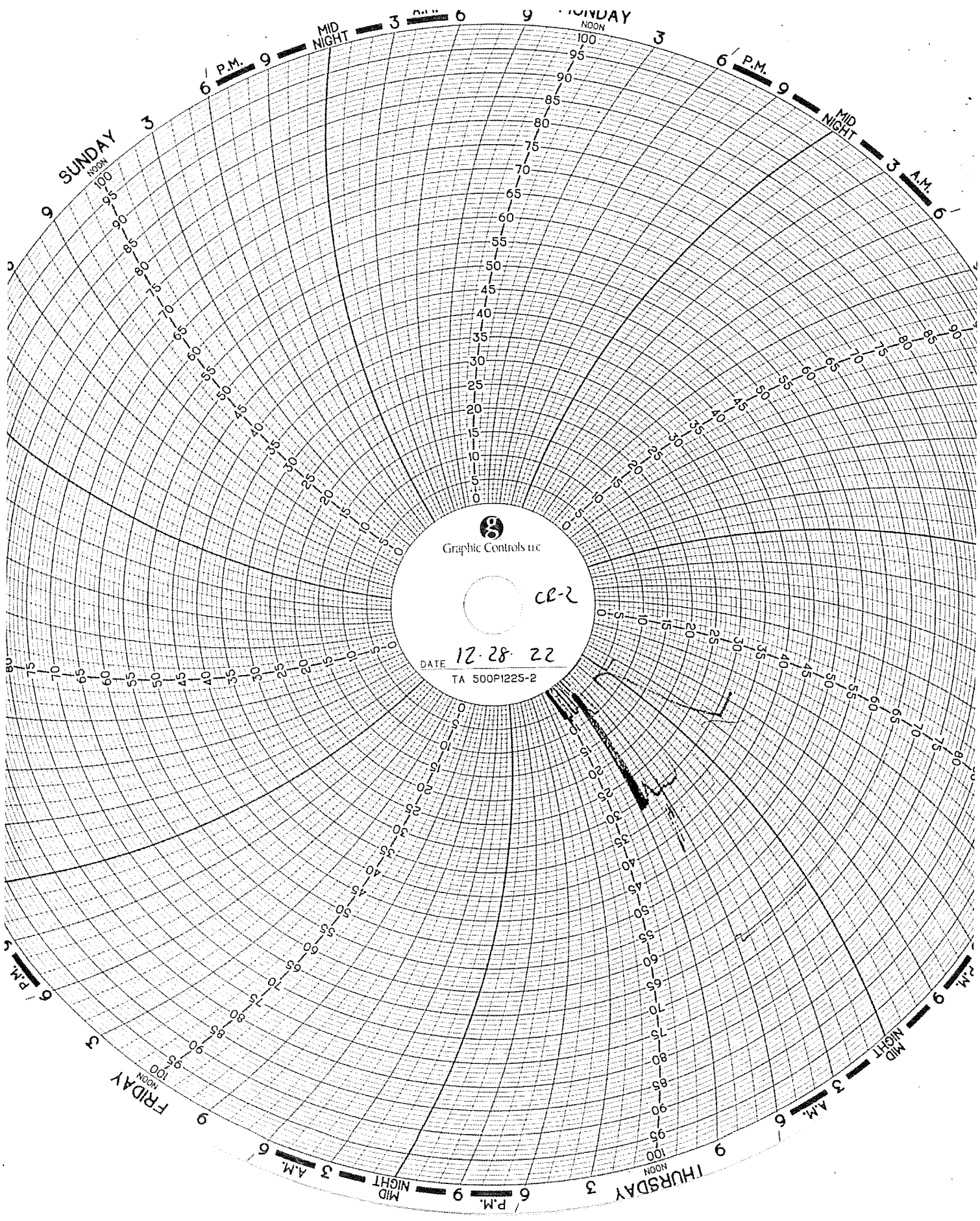
6 P.M. 9 MID NIGHT 3 6

6 P.M. 9 MID NIGHT 3 6









Graphic Controls inc

CE-2

DATE 12-28-22  
TA 500P1225-2

SUNDAY  
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THURSDAY  
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## 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

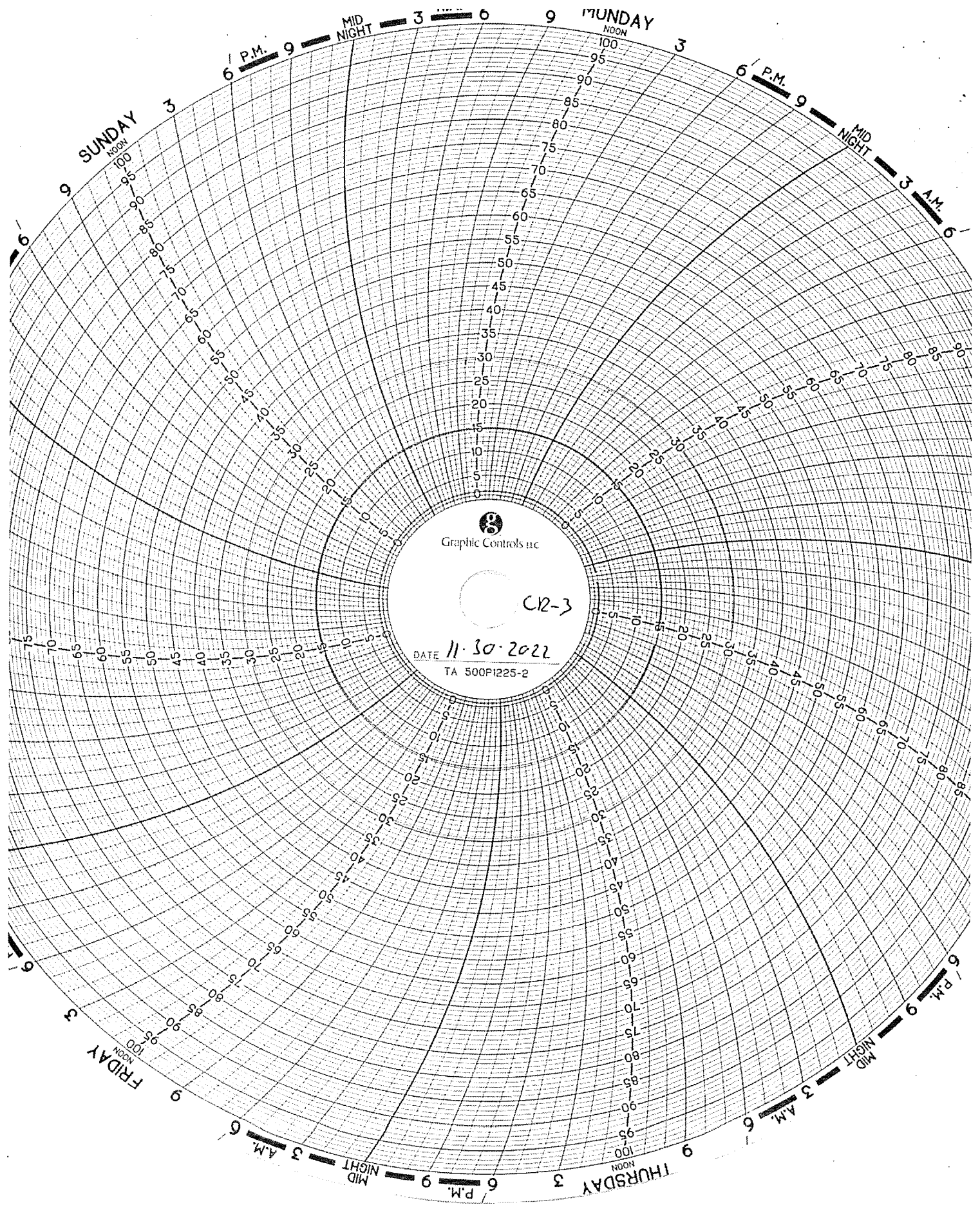
**Red Pen** - Well 1 Monthly Volume (chart value x 100,000)

Channel #3

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

Channel #4

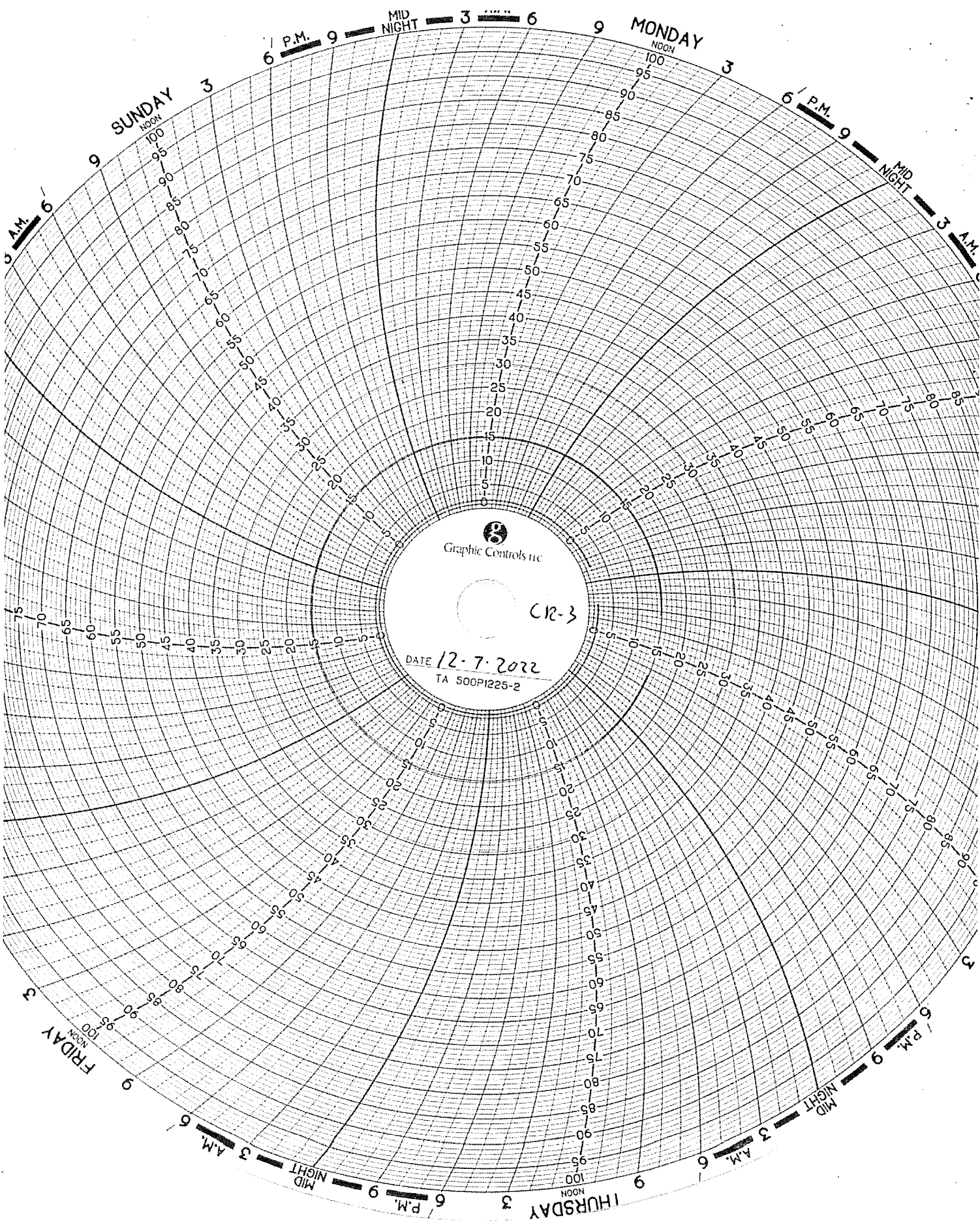
**Black Pen** - Temperature (chart value x 0)



Graphic Controls LLC

C12-3

DATE 11-30-2022  
TA 500PI225-2

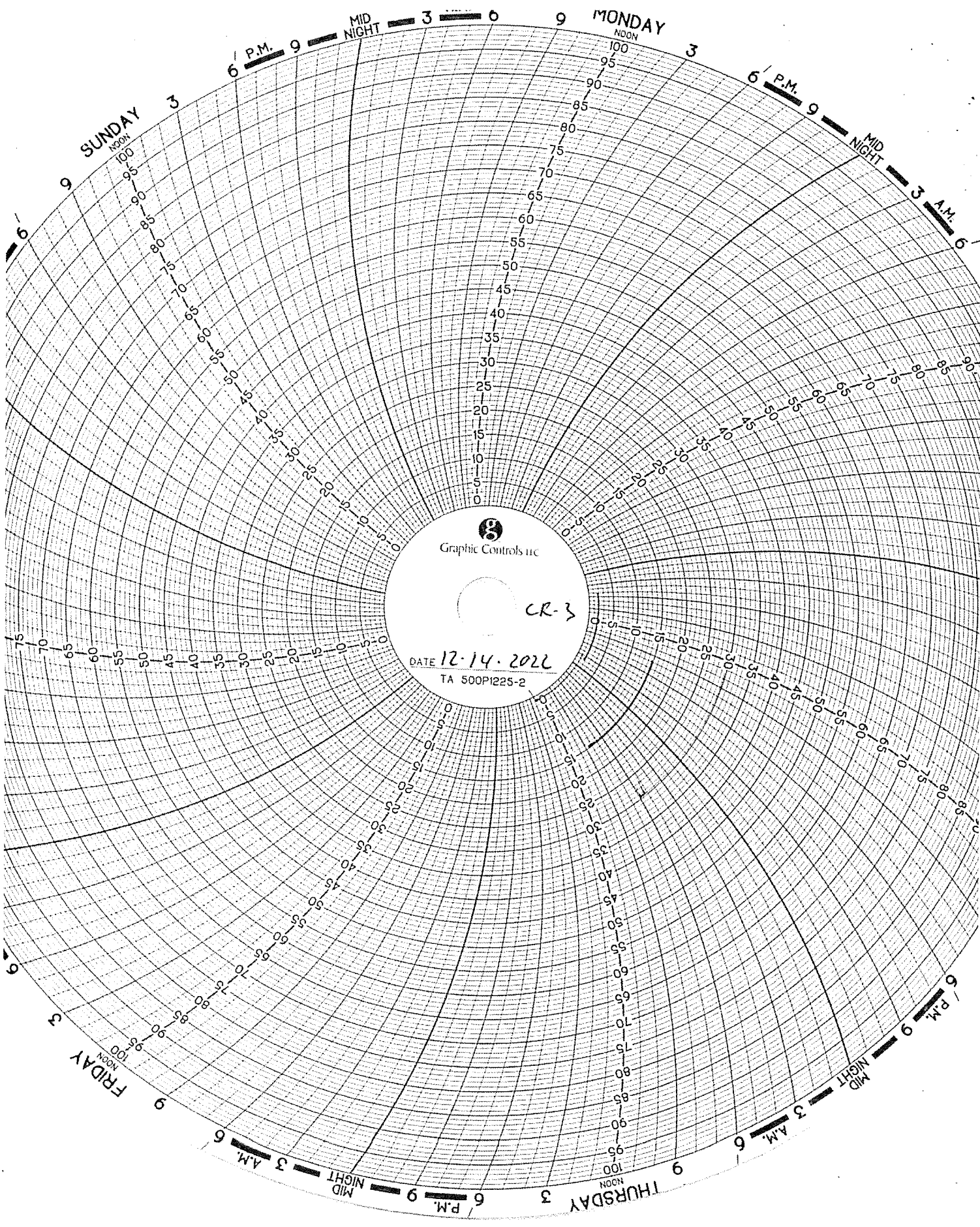


Graphic Controls Inc

C12-3

DATE 12-7-2022

TA 500P1225-2

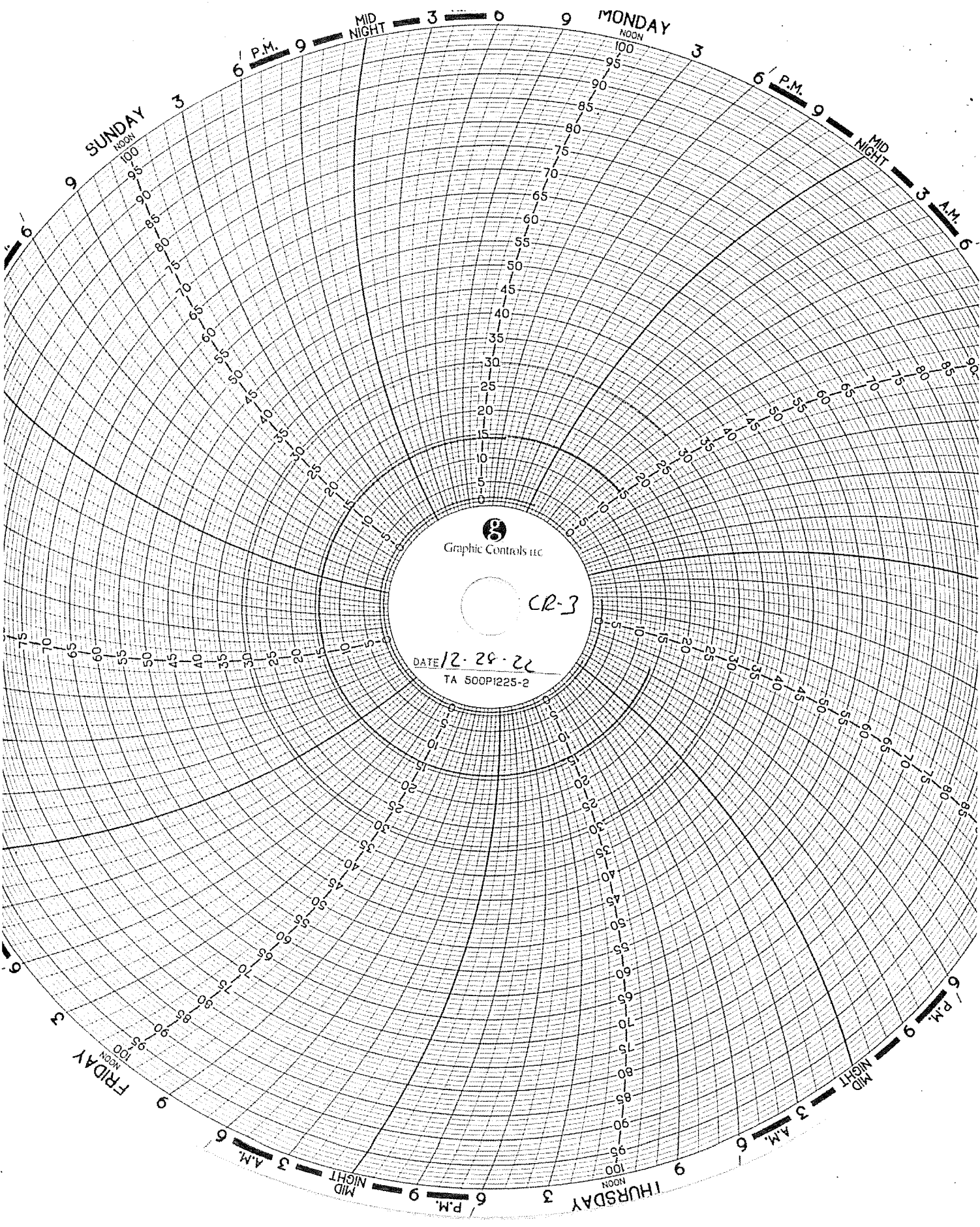


Graphic Controls Inc

CR-3

DATE 12-14-2022

TA 500P1225-2



Graphic Controls LLC

CR-3

DATE 12-28-22  
TA 500P1225-2

SUNDAY  
NOON

MONDAY  
NOON

FRIDAY  
NOON

THURSDAY  
NOON

6 P.M. 9

6 P.M. 9

MID NIGHT 3 A.M. 6

6 A.M. 9

6 P.M. 9

MID NIGHT 3 A.M. 6

6 P.M. 9

6 A.M. 9

MID NIGHT 3 A.M. 6

## **CORROSION MONITORING**

CORROSION MONITORING PLAN  
COUPON SUMMARY

Date	Hastelloy (C267)	Stainless Steel (316L)	Fiberglass (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	
12/19/2014	13.321 g	9.315 g	7.084 g	
1/12/2015	13.321 g	9.289 g	7.063 g	New hastelloy coupon
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	
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	New stainless steel coupon
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	
5/31/2016	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	
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	New Fiberglass coupon
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	
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	

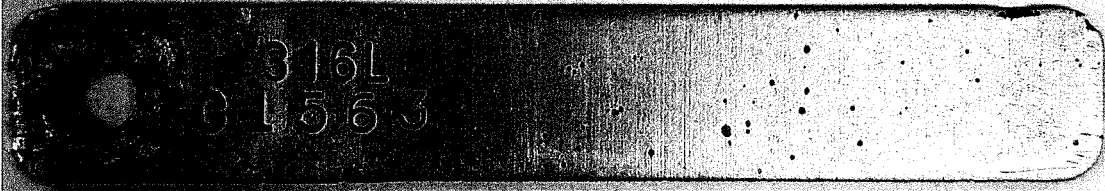
CORROSION MONITORING PLAN  
COUPON SUMMARY

Date	Hastelloy	Stainless Steel	Fiberglass	
4/18/2022	13.275	9.339	16.656	
5/16/2022	13.298	9.328	16.600	
6/15/2022	13.276	9.300	16.219	
7/20/2022	13.303	9.324	16.393	
8/17/2022	13.277	9.195	15.841	
9/9/2022	13.276	9.171	15.757	
10/19/2022	13.274	9.157	15.623	
11/18/2022	13.274	9.145	15.801	
12/19/2022	13.278	9.132	15.588	

**316L / C1563**

Weight: 9.132

Date: 12/19/2022



**C276 / 5**

Weight: 13.278

Date: 12/19/2022



**Fiberglass**

Weight: 15.588

Date: 12/19/2022



## COOROSION MONITORING COUPONS VISUAL DESCRIPTION

**December 2022**

### **Fiberglass Coupon**

The coupon is black in color with a semi-smooth texture on both sides. Its cut edges appear sanded. The coupon is free of cracks, pitting, swelling, blemishes, and corrosion. There is no obvious effect on this coupon since last month. The coupon has apparently been dyed black by received wastestreams.

### **Hastelloy Coupon**

This coupon is identified as C276 with Serial Number 5. The coupon is silver in color with a lightly sandblasted texture. It is clean and free of pits, cracks, and blemishes. There is no effect to this coupon.

### **Stainless Steel Coupon**

This coupon is identified as: Serial Number C1563 / 316L. No change to this coupon since last month. It is clean with some pitting.

# 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.



Progress Through Innovation, Technology and Customer Satisfaction

October 22, 2015

## • TEST REPORT •

PN 125322  
PO 00154

### PLASTICS TESTING DEPARTMENT

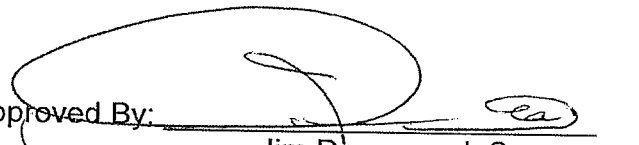
Prepared For:

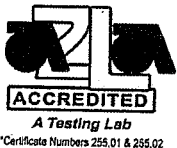
John Frost  
Environmental Geo-Technologies, LLC  
28470 Citrin Drive  
Romulus, MI 48174

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

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Registered

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Fax (330) 794-6610 | Worldwide (330) 794-6600



AKRON RUBBER DEVELOPMENT LABORATORY, INC.

Progress Through Innovation, Technology and Customer Satisfaction

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

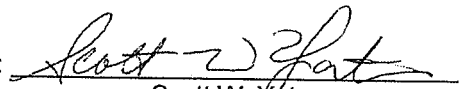
96

Prepared By:

  
Melissa Martin  
Sr. Project Technician

tc

Approved By:

  
Scott W. Yates  
Plastics Testing Assistant Manager

December 12, 2016

**TEST REPORT**


**PN 132662**  
PO

**PLASTICS TESTING DEPARTMENT**

Prepared For:

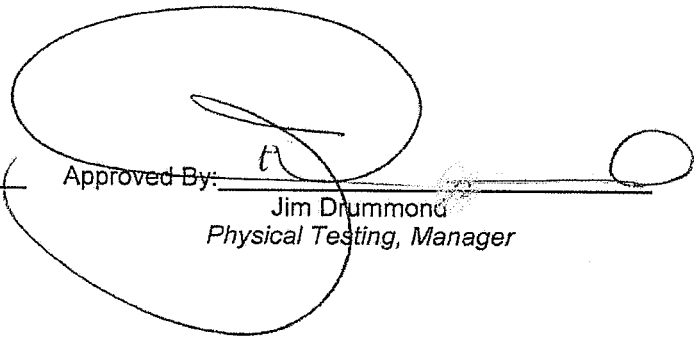
John Frost  
Environmental Geo-Technologies, LLC  
28470 Citrin Drive  
Romulus, MI 48174

Prepared By:

  
Melissa Martin  
Senior Project Technician

Rev 041916

Approved By:

  
Jim Drummond  
Physical Testing, Manager



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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.

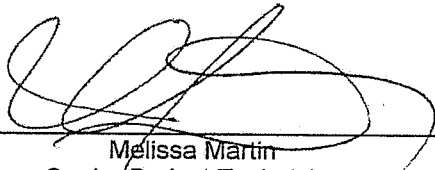
**RECEIVED:** One (1) small section identified as; Fiberglass Coupon.

**BARCOL HARDNESS ASTM D 2583-13a**  
Instant Reading

**RESULTS**

Barcol Hardness, Instant 96

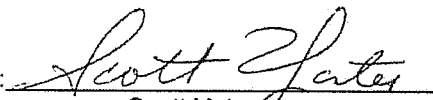
Prepared By:



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



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

**ISO 9001:2008**  
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\*Certificate Numbers 255.01 & 255.02

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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

Approved By:

Scott Yates  
Plastics Testing, Assistant Manager

sc

*\*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) 885-3585  
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:

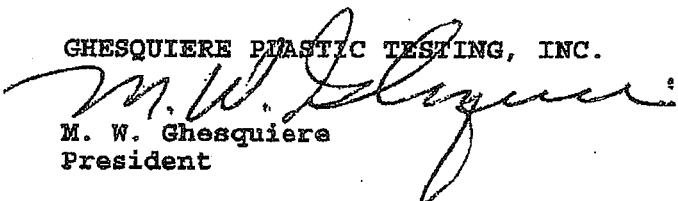
The following determination was made based upon the above test:

BARCOL HARDNESS

	<u>Hardness</u>
Specimen 1	90

Specimen is being returned with this report for further evaluation.

GHESQUIERE PLASTIC TESTING, INC.

  
M. W. Ghesquiere  
President

MWG/kni

# 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

# 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:

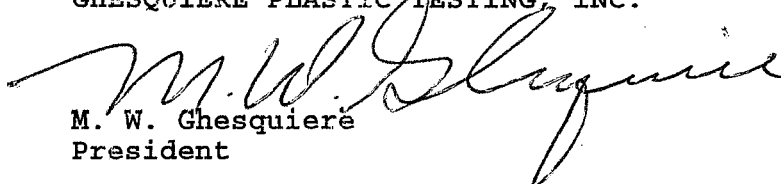
The following determination was made based upon the above test:

BARCOL HARDNESS

	<u>Hardness</u>
Specimen 1	85

Specimen was returned to the client June 16, 2014.

Ghesquiere Plastic Testing, Inc.

  
M. W. Ghesquiere  
President

MWG/dm



Testing. Development. Problem Solving.

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*



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Toll Free (800) 830-ARDL | Worldwide (330) 794-6600 | Fax (330) 794-6610

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

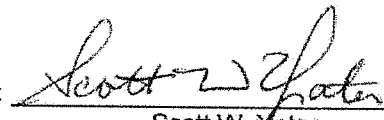
97

Prepared By:



Melisea 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

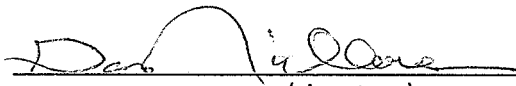
Customer: Republic Industrial and Energy Solutions, LLC

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 Date: 01/12/2021  
(print or type name)

**BARCOL HARDNESS REPORT**

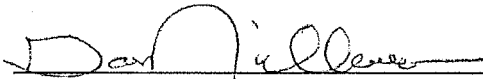
**Customer:** Republic Industrial and Energy Solutions, LLC

**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                      **Date:** 10/11/2021  
(print or type name)

**BARCOL HARDNESS REPORT**

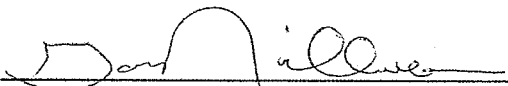
**Customer:** Republic Industrial and Energy Solutions

**Component Tested:** Fiberglass Coupon

**PO Number:** Credit Card                      **Job Number:** 3734

**Calibration:**      **Disc:** 43 - 48                      **Actual Reading:** 45

Barcol Readings	1	2	3	Average
Side One:	55	50	58	54
Side Two:	53	56	59	56
	<b>Overall Average:</b>			55

**Tested By:**   
(signature)

Gary Nicholson  
(print or type name)

**Date:** 08/23/2022

## **MAINTENANCE**

# UIC Monthly Maintenance Log

12/20/2022	Well 1&2	Injection pH probe calibrated
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## **INJECTION FINGERPRINTS**

In reviewing the December 2022 injection fingerprints, RIES operations personnel discovered that one (1) injection fingerprint is not included in the December 2022 monthly report. The missing injection fingerprint is:

I12162202 (IMMDDYY##)

Additionally, RIES operations personnel discovered that the time of injection fingerprints was not noted on the corresponding fingerprint documents for several fingerprint forms in December.

Corrective actions to prevent this from occurring in the future include additional training for operations personnel responsible for obtaining and recording fingerprints and reinforcing the gravity of accurate reporting. This issue has been discussed as part of RIES management daily meetings to ensure that injection fingerprints are up to date and complete. We are continually addressing ways to confirm fingerprint document accuracy.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/01/22
Receiving ID#	I120122G
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	TG
Sampled by	TG

SSI-1

LAB INFORMATION	
Compatible? (RT# )	yes
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>146
pH (S.U.)	<del>6.67</del> 5.51 TG
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.00
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	54.9
Conductivity	8.84
% Solids	1.71
Turbidity	Yes No
Color	
TSS (%)	<.1
Radiation Screen (as needed)	
Lab Signature/Initials	TG



RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/01/22
Receiving ID#	12012202
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.)	6.72
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.01
Physical Description:	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	68.2
Conductivity	25.2
% Solids	1.03
Turbidity	Yes No
Color	
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.T.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/01/22
Receiving ID#	RI2012203
Manifest #	Line
Land Ban Cert included	Yes .. No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	
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.)	6.91
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	73.6
Conductivity	30.9 mS
% Solids	2.03
Turbidity	Yes No
Color	
TSS (%)	2.01
Radiation Screen (as needed)	
Lab Signature/Initials	J.P.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/1/22
Receiving ID#	I12012204
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)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 770
pH (S.U.)	6.78
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.01
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	38 21.4
Conductivity	30.2m
% Solids	2.12
Turbidity	Yes No
Color	
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.T.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/02/22
Receiving ID#	12022201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	NE
Sampled by	NE

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	7.25
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.000
Physical Description:	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	62°
Conductivity	31
% Solids	1.68
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	NE

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/02/22
Receiving ID#	BI2022002
Manifest #	Line
Land Ban Cert included	Yes .. No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	N.E.

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	7140
pH (S.U.)	7.88
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.00
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	65.4
Conductivity	13.55 mS
% Solids	1.77
Turbidity	Yes No
Color	
TSS (%)	<6.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/04/22
Receiving ID#	812022203
Manifest #	Line
Land Ban Cert included	Yes .. No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.F.
Sampled by	BJ

LAB INFORMATION	
Compatible? (RT# )	Y
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	
pH (S.U.)	6.53
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.00
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	73.2
Conductivity	9.24
% Solids	LOL
Turbidity	(Yes) No
Color	lt. Brown
TSS (%)	LOL
Radiation Screen (as needed)	
Lab Signature/Initials	J.F.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12 / 5 / 22
Receiving ID#	I12052201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	NE
Sampled by	NE

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	6.60
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.00
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	54°
Conductivity	1219
% Solids	.63%
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.T.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	1-5-22
Receiving ID#	I12052202
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.T.
Sampled by	OS

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	
pH (S.U.)	7.96
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.00
Physical Description:	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	71.1
Conductivity	1098
% Solids	<0.1
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.T.



RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/05/22
Receiving ID#	212052203
Manifest #	Line
Land Ban Cert included	Yes .. No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	BB

LAB INFORMATION	
Compatible? (RT# )	U
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 40
pH (S.U.)	5.29
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.00
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	57.3
Conductivity	20.4 mS
% Solids	0.87
Turbidity	Yes No
Color	
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/5/22
Receiving ID#	112082204
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.)	6.99
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.01
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	74.1
Conductivity	28.0ms
% Solids	1.65
Turbidity	Yes No
Color	
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	(J.H.)

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12 / 6 / 22
Receiving ID#	I 182062201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	NE
Sampled by	NE

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	2140
pH (S.U.)	6.53
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.000
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	59°
Conductivity	26.9
% Solids	1.83%
Turbidity	Yes No
Color	
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	NE

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/06/22
Receiving ID#	I12062202
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)	3140
pH (S.U.)	6.99
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description:	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	73.8
Conductivity	30.0 mS
% Solids	0.94
Turbidity	Yes No
Color	
TSS (%)	20.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/6/22
Receiving ID#	FEI12062205
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.M.K.
Sampled by	A.W.
LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 140
pH (S.U.)	6.50
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.01
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	74.0
Conductivity	27.3 MS
% Solids	1.42
Turbidity	Yes No
Color	
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.M.K.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12 / 7 / 22
Receiving ID#	RI2072204
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	NE
Sampled by	NE

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>110
pH (S.U.)	6.46
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.000
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	57°
Conductivity	11.25
% Solids	1.05%
Turbidity	Yes No
Color	
TSS (%)	0.1
Radiation Screen (as needed)	
Lab Signature/Initials	NE

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/17/22
Receiving ID#	212072202
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	JH
Sampled by	UE

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 140
pH (S.U.)	6.80
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	73.2
Conductivity	19.64
% Solids	0.80
Turbidity	(Yes) No
Color	11. Brown
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	JH

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/07/22
Receiving ID#	R12072203
Manifest #                      Line	
Land Ban Cert included	Yes      No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	
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.)	6.41
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes      No
Oil in Sample?	Yes      No
Temperature (F)	70.5
Conductivity	29.0ms
% Solids	1.13
Turbidity	Yes      No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.N



RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12 / 12 / 22
Receiving ID#	I12122201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	NE
Sampled by	NE

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	7.60
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.010
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	55°
Conductivity	28.0
% Solids	1.60%
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	NE

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12 / 12 / 22
Receiving ID#	112122202
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	NE
Sampled by	NE

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	
pH (S.U.)	7.06
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.005
Physical Description:	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	55.0°
Conductivity	31.6
% Solids	2.81%
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	NE

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/12/22
Receiving ID#	I12122203
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
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.)	6.84
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.01
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	72.4
Conductivity	33.7 mS
% Solids	1.36
Turbidity	Yes No
Color	
TSS (%)	LO
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12 / 13 / 22
Receiving ID#	12132261
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	NE
Sampled by	NE

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	7.10
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.000
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	58°
Conductivity	314
% Solids	3.56%
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	NE

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/13/22
Receiving ID#	I12132209
Manifest #	Line
Land Ban Cert included	Yes - No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	JH
Sampled by	NE

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	6.85
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.01
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	71.6
Conductivity	31.9 us
% Solids	1.46
Turbidity	Yes No
Color	
TSS (%)	<30
Radiation Screen (as needed)	
Lab Signature/Initials	JR

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12 / 13 / 22
Receiving ID#	E12132203
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	08:35
Time out	
Received by	J.H
Sampled by	DM
LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	
pH (S.U.)	7.06
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	69.4
Conductivity	33.0ms
% Solids	1.42
Turbidity	Yes No
Color	
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12 / 14 / 22
Receiving ID#	I/2142201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	NE
Sampled by	NE

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>116
pH (S.U.)	7.18
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.010
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	59°
Conductivity	329
% Solids	1.86%
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	NE

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/19/22
Receiving ID#	I12142202
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	11:20
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)	>140
pH (S.U.)	7.17
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	166.8
Conductivity	32.7 ms
% Solids	1.71
Turbidity	Yes No
Color	
TSS (%)	10.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.



RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/14/22
Receiving ID#	#12142203
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	08:23 (2-15-22)
Time out	
Received by	
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.)	6.72
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	72.2
Conductivity	36.5 mS
% Solids	1.28
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.P.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/15/22
Receiving ID#	112152201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	6:40am
Time out	
Received by	NE
Sampled by	NE

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	
pH (S.U.)	6.83
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.01
Physical Description	2010-5.7
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	60°
Conductivity	30.1
% Solids	1.98%
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.P.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/15/22
Receiving ID#	112152209
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	11:00
Time out	
Received by	
Sampled by	ME

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 220
pH (S.U.)	6.75
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	68.9
Conductivity	37.9 ms
% Solids	1.34
Turbidity	Yes No
Color	
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.F.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/15/22
Receiving ID#	I12152203
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.J.
Sampled by	D.M.

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 140
pH (S.U.)	10.99
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	71.5
Conductivity	36.1 mS
% Solids	1.28
Turbidity	Yes No
Color	
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.J.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12 / 16 / 22
Receiving ID#	I12162201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	07:00
Time out	
Received by	NE
Sampled by	NE

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	6.80
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.000
Physical Description:	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	60°
Conductivity	36
% Solids	1.61%
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	NE

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/16/22
Receiving ID#	812162203
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	10:30 12/19/22
Time out	
Received by	J.M.
Sampled by	BB

LAB INFORMATION	
Compatible? (RT# )	Y
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	5140
pH (S.U.)	6.36
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	68.2
Conductivity	21.3 mS
% Solids	0.81
Turbidity	Yes No
Color	
TSS (%)	50.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12 / 19 / 22
Receiving ID#	T12192201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	9:15
Time out	
Received by	NE
Sampled by	NE

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>40
pH (S.U.)	7.67
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.000
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	53°
Conductivity	10.55
% Solids	.78%
Turbidity	Yes No
Color	
TSS (%)	<0.4
Radiation Screen (as needed)	
Lab Signature/Initials	NE

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/19/22
Receiving ID#	112192207
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	13:00
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)	> 140
pH (S.U.)	7.06
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	57.6
Conductivity	23.60 mS
% Solids	0.80
Turbidity	Yes No
Color	
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H



RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/19/22
Receiving ID#	RI192203
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	10:30 12/20/22
Time out	
Received by	G.H.
Sampled by	DM

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	7.06
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	72.7
Conductivity	32.7 mS
% Solids	1.36
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	G.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/19/22
Receiving ID#	812192204
Manifest #	Line
Land Ban Cert included	Yes - No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	10:10 / 12-20-22
Time out	
Received by	JH
Sampled by	BS

LAB INFORMATION	
Compatible? (RT# )	✓
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	6.81
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	72.5
Conductivity	35.3 mS
% Solids	1.95
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12 / 20 / 22
Receiving ID#	I 12202201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	7:00
Time out	
Received by	J.H.
Sampled by	N.Y.

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	6.91
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.000
Physical Description:	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	55°
Conductivity	36
% Solids	1.62%
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H./N.Y.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	1/20/22
Receiving ID#	12202202
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	12:20
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.)	6.60
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	69.2
Conductivity	34.2 mc
% Solids	1.19
Turbidity	Yes No
Color	
TSS (%)	2.03
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/20/22
Receiving ID#	212202203
Manifest #	Line
Land Ban Cert included	Yes - No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	JH
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.)	6.48
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.03
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	71.8
Conductivity	35.3 mS
% Solids	1.86
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	JH

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/21/22
Receiving ID#	212212201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	8:40
Time out	
Received by	J.P.
Sampled by	TL

SST-1

LAB INFORMATION	
Compatible? (RT# )	Yes
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	6.85
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.00
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	56°
Conductivity	34.2
% Solids	1.41
Turbidity	Yes No
Color	
TSS (%)	<.1
Radiation Screen (as needed)	
Lab Signature/Initials	TL

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/22/22
Receiving ID#	I2212202
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	11:30
Time out	
Received by	J.N
Sampled by	NE

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	6.00
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.03
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	61.4
Conductivity	41.1 μS
% Solids	1.60
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.N

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/21/22
Receiving ID#	R12212203
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)	2140
pH (S.U.)	5.88
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	66.0
Conductivity	25.2 mS
% Solids	1.46
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.N



RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/22/22
Receiving ID#	512222201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	07:20
Time out	
Received by	J.H.
Sampled by	G.J. - <del>J.H.</del> J.F.
LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	
pH (S.U.)	5.93
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	63.7
Conductivity	20.8 $\mu$ S
% Solids	1.26
Turbidity	Yes No
Color	
TSS (%)	<del>5.7</del> <del>6.0</del> 0.5
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	2/22/22
Receiving ID#	I12222202
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	12/22 13:30
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)	
pH (S.U.)	5.86
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.03
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	68.1
Conductivity	30.6 mS
% Solids	
Turbidity	Yes No
Color	
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/23/22
Receiving ID#	I12232201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	7:10
Time out	
Received by	NE
Sampled by	NE

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	5.79
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.010
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	51°
Conductivity	46.8
% Solids	.029%
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	NE

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12 / 23 / 22
Receiving ID#	12232262
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	10:15
Time out	
Received by	NE
Sampled by	NE
LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	<del>6.5</del> 6.88
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.000
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	54.9
Conductivity	36.5
% Solids	1.82%
Turbidity	Yes No
Color	
TSS (%)	0.25%
Radiation Screen (as needed)	_____
Lab Signature/Initials	NE

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/23/22
Receiving ID#	E12232103
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	15:15
Time out	
Received by	J.F.
Sampled by	T.G.

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	6.39
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	56.4
Conductivity	37.0 uS
% Solids	1.47
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.F.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12 / 27 / 22
Receiving ID#	T12272201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	7:00
Time out	
Received by	NE
Sampled by	NE

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 140
pH (S.U.)	7.16
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.000
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	51
Conductivity	33.8
% Solids	1.80 <sup>000</sup>
Turbidity	Yes No
Color	
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	NE

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/22/22
Receiving ID#	712772202
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	10:06
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)	5740
pH (S.U.)	7.34
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	62.1
Conductivity	35.9 uS
% Solids	2.25
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/27/22
Receiving ID#	I12272203
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)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	7.27
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	55.5
Conductivity	36.3 us
% Solids	1.57
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.T.



RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/27/22
Receiving ID#	I12272204
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.)	7.28
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes      No
Oil in Sample?	Yes      No
Temperature (F)	70.6
Conductivity	35.7 mS
% Solids	3.27
Turbidity	Yes      No
Color	
TSS (%)	20.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12 / 28 / 22
Receiving ID#	F12282201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	7:00
Time out	
Received by	NE
Sampled by	NE

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	7.24
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.000
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	54°
Conductivity	31.6
% Solids	.65%
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	NE

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/28/22
Receiving ID#	F12282202
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	<i>(Signature)</i>
Sampled by	<i>(Signature)</i>
LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	
pH (S.U.)	7.24
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	62.1
Conductivity	33.3
% Solids	
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	<i>(Signature)</i>

RECEIVING & APPROVAL FORM

SST-1

RECEIVING INFORMATION	
Date	12/28/22
Receiving ID#	112282203
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	0800/12-29-22
Time out	
Received by	J.A.
Sampled by	TC

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	7.39
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	72.4
Conductivity	35.1 mS
% Solids	2.08
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.A.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/28/22
Receiving ID#	I12282204
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	5800/12-29-22
Time out	
Received by	G.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.)	7.29
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	71.2
Conductivity	34.4 us
% Solids	2.92
Turbidity	Yes No
Color	
TSS (%)	50.1
Radiation Screen (as needed)	
Lab Signature/Initials	G.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/29/22
Receiving ID#	I/2292201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	07:00
Time out	
Received by	N.E
Sampled by	N.E

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	7.24
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.000
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	54°
Conductivity	36.1
% Solids	2.23%
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	NE

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/29/22
Receiving ID#	12292202
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	B
LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	2.30
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	63.1
Conductivity	34.8 mS
% Solids	2.62
Turbidity	Yes No
Color	
TSS (%)	<0.4
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/29/22
Receiving ID#	I12292203
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	XJ 00N
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)	2740
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)	73.0
Conductivity	34.5 us
% Solids	1.87
Turbidity	Yes No
Color	
TSS (%)	40.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.



RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12 / 30 / 22
Receiving ID#	I12302201
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	7:30
Time out	
Received by	NE
Sampled by	NE

LAB INFORMATION	
Compatible? (RT# )	
PCBs (ppm) (Oily Waste Only)?	
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	7.60
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.000
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	54°
Conductivity	29.7
% Solids	4.27%
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	NE

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/30/22
Receiving ID#	E12302202
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	1/3/23 8:30
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)	>140
pH (S.U.)	6.83
Cyanides? (mg/L)	
Sulfides? (ppm)?	
Specific Gravity	1.02
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	72.5
Conductivity	24.2 mS
% Solids	0.94
Turbidity	Yes No
Color	
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H

## **WASTE PROFILES**



# Republic Services

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #  
64402216791

Expiration Date  
10/31/2023

### I. Decision Request:

Initial     Recertification     Change

Disposal Facility: 6440 - Detroit Ind Well

Generator Name: VALICOR ENVIRONMENTAL SERVICES

Generator Site Address: 6011 WYOMING

City: DEARBORN

County:

State: MI

Zip:

Name of Waste: WASTE PHENOL DISTILLATE SOLUTION

Estimated Annual Volume: 600,000 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: 12/7/2022

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: 12/7/2022

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 PROFILE**

Profile # 64402216791

**GENERATOR INFORMATION**

Name: Valcor Environmental Services USEPA ID # MID 064 191 471  
 Facility Address: 6011 Wyoming SIC/NAICS Code: State Code: \_\_\_\_\_  
 City: Dearborn State: MI Zip Code: 48126  
 Contact: Michael Drops Title: QA/QC Manager Phone: ( 313 ) 582-8032 Fax: ( 313 ) 582-1422

**BILLING INFORMATION**

SAME AS ABOVE

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

**WASTE INFORMATION**

Name of Waste/Common Chemical Name:  
waste phenol distillate solution  
 Process Generating Waste (Please be specific, incomplete information may delay the approval process):  
phenol distillate solution from production tank clean outs between batches  
phenol in distillate solution is used

**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: N/A

**PHYSICAL CHARACTERISTICS OF WASTE**

<b>Color:</b> <input type="checkbox"/> White/Clear <input checked="" type="checkbox"/> Black/Brown <input type="checkbox"/> Other	<b>Suspended Solids</b> <input type="checkbox"/> 0-1 % <input type="checkbox"/> 3-5 % <input checked="" type="checkbox"/> 1-3 % <input type="checkbox"/> > 5 %	<b>Layers:</b> <input type="checkbox"/> Multi layered <input type="checkbox"/> Bi-Layered <input checked="" type="checkbox"/> Single Phase	<b>Specific Gravity:</b> <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: _____
--------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

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 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
phenol distillates	1	20			%
water	80	99			%
					%

Metals: Indicate if this waste contains any of the following metals  
 If Generator knowledge-provide backup  Lab Analysis  Generator Knowledge

	Not Present	Concentration	Not Present	Concentration		TCPL	LTOTAL		
PCB	<input checked="" type="checkbox"/>	ppm	Aromatic Amine	<input checked="" type="checkbox"/>	ppm			Arsenic (As)	D004 <input checked="" type="checkbox"/> <5 ppm 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 checked="" type="checkbox"/> <5 ppm 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

TCPL 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: 1000

3. DOT Shipping Name: phenol solution Hazard Class 6.1 UN/NA UN2821

PG II ERG 153 Hazardous Constituents for "h.o.s." \_\_\_\_\_

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

5. Number of Units to Ship Now: 5000 gallons 6. Anticipated Volume / Units per Year: 50,000 gal/month or  One Time

6. Special Handling Requirements including PPE: 600,000 Gal/YEAR

Chemical resistant gloves, possible respiratory protection

**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: Michael Djope Title: QA/QC Manager

Generator's Signature: [Signature] Date: 10/31/2022

**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 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

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	11/8/22
Receiving ID#	Waste Phenol Distillate Sol.
Manifest #	Line
Land Ban Cert included	Yes No
EGT Approval #	
Generator	Valcor Env. Svc.
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	J.H.

LAB INFORMATION	
Compatible? (RT#)	Y
PCBs (ppm) (Oily Waste Only)?	N/A
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 140
pH (S.U.)	7.11
Cyanides? (mg/L)	430
Sulfides? (ppm)?	2200
Specific Gravity	1.00
Physical Description	liquid
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	71.9
Conductivity	1.201ms
% Solids	0.30
Turbidity	Yes No
Color	DK Brown
TSS (%)	20.1
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 # 64402217086		Expiration Date 11/28/2023	
<b>I. Decision Request:</b> <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Recertification <input type="checkbox"/> Change			
Disposal Facility: 6440 - Detroit Ind Well			
Generator Name: BIG RUN POWER PRODUCERS			
Generator Site Address: 2238 RIVER CITITES DRIVE			
City: ASHLAND	County: <input type="text"/>	State: KY	Zip: <input type="text"/>
Name of Waste: ARSENIC CONTAMINATED CONDENSATE WATER			
Estimated Annual Volume: 260000 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: 12/13/2022

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: 12/13/2022

Name (Printed): John Frost





**Republic Industrial and Energy Solutions, LLC**  
 28470 Citrin Dr, Romulus, MI 48174. Telephone 734 948 1000. Fax 734 948 1002

**GENERATOR WASTE PROFILE**

Profile # \_\_\_\_\_

**GENERATOR INFORMATION**

Name: Big Run Power Producers USEPA ID # KYR000073437  
 Facility Address: 2238 River Cities Drive SIC/NAICS Code: \_\_\_\_\_ State Code: \_\_\_\_\_  
 City: Ashland State: KY Zip Code: 41102  
 Contact: Joe Hogsten Title: \_\_\_\_\_ Phone: ( ) \_\_\_\_\_ Fax: ( ) \_\_\_\_\_

**BILLING INFORMATION**

SAME AS ABOVE

Company Name: U.S. Waste Industries  
 Address: 4420 Jefferies Highway  
 City: Walterboro State: SC Zip Code: 29488  
 Attention: Tina Smith Title: AP Phone: ( 803 ) 538-2601 Fax: ( ) \_\_\_\_\_

**WASTE INFORMATION**

Name of Waste/Common Chemical Name: Arsenic contaminated Condensate Water  
Arsenic Contaminated Condensate Water

Process Generating Waste (Please be specific, incomplete information may delay the approval process):  
Generated from natural gas processing. Condensate water is knocked out of gas lines when gas passes through piping. Gas gets hot from pressure changes at different compressors which generates this condensate.

**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: D004 D010 D035

**PHYSICAL CHARACTERISTICS OF WASTE.**

<b>Color:</b> <input type="checkbox"/> White/Clear <input type="checkbox"/> Black/Brown <input checked="" type="checkbox"/> Other	<b>Suspended Solids</b> <input checked="" type="checkbox"/> 0-1 % <input type="checkbox"/> 3-5 % <input type="checkbox"/> 1-3 % <input type="checkbox"/> > 5%	<b>Layers:</b> <input type="checkbox"/> Multi layered <input type="checkbox"/> Bi-Layered <input checked="" type="checkbox"/> Single Phase	<b>Specific Gravity:</b> <input type="checkbox"/> <0.8 <input type="checkbox"/> 1.0-1.2 <input checked="" type="checkbox"/> 0.8-1.0 <input type="checkbox"/> 1.3-1.4 Exact / Other _____
--------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

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 - 0 PPM (MUST BE COMPLETED)

TOTAL COMPOSITION OF WASTE - MUST BE EQUAL TO OR GREATER THAN 100% (LIST EACH CONSTITUENT <math>\leq 0.1\%</math>)

CONSTITUENT	MAX	MIN	CONSTITUENT	MAX	MIN
Water	99	100%	Decachlorophenol (mg/L)	0.001	40.00
Arsenic (mg/l)	0.001	10.00	Selenium (mg/L)	0.001	1.00
MEK (mg/L)	0.001	100.00	Acetone (mg/L)	0.001	42

AF

Republic Industrial & Energy Solutions - 28470 Citrin Drive - Romulus - MI - 48174

Waste Profile - Page 2

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	10.00 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)	D008	<input checked="" type="checkbox"/> <1	ppm	ppm
Cyanides Total	<input checked="" type="checkbox"/>	ppm	Fungicides	<input checked="" type="checkbox"/>	ppm	Chromium (Cr)	D007	<input checked="" type="checkbox"/> <5	ppm	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 type="checkbox"/> <1	ppm	1.5 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 1.7 (0004)  
 3. DOT Shipping Name RQ, NA3082, Hazardous Waste, Liquid, N.O.S. (Arsenic) Hazard Class 9 UN/NA NA3082  
 PG III ERG \_\_\_\_\_ Hazardous Constituents for "n.o.s." Arsenic  
 4. Method of Shipment:  Bulk Tanker  Vac truck  Rail Car  Drums  Totes  
 5. Number of Units to Ship Now 5 Tankers 6. Anticipated Volume / Units per Year: 5,000 Gal / Quarter or  One Time  
 8. 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: Emily Zambuto DocuSigned by: \_\_\_\_\_ Title: Sr. Director of Environmental C  
 Generator's Signature: Emily Zambuto Date: 12/5/2022

**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. \_\_\_\_\_ 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

## **F039 Analysis**



13-Feb-2023

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

Re: **December F039 Leachate- 01.03.23**

Work Order: **23010078**

Dear Rick,

ALS Environmental received 1 sample on 03-Jan-2023 08:00 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 41.

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: Chelsey Cook

Chelsey Cook  
Project Manager

### Report of Laboratory Analysis

Certificate No: FL E871106

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

---

**Client:** Republic Industrial and Energy Solutions, LLC  
**Project:** December F039 Leachate- 01.03.23  
**Work Order:** 23010078

**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>
23010078-01	December 2022 F039	Liquid		1/3/2023 13:52	1/3/2023 20:00	<input type="checkbox"/>

---

**Client:** Republic Industrial and Energy Solutions, LLC  
**Project:** December F039 Leachate- 01.03.23  
**WorkOrder:** 23010078

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**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	



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**Client:** Republic Industrial and Energy Solutions, LLC  
**Project:** December F039 Leachate- 01.03.23  
**Work Order:** 23010078

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**Case Narrative**

The attached "Sample Receipt Checklist" documents the date of receipt, status of custody seals, container integrity, preservation, and temperature compliance.

Dioxin/Furan analysis was performed at ALS Houston. Subcontracted analytical data has been appended to this report in its entirety.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. A copy of the laboratory's scope of accreditation is available upon request.

Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting.

Any flags on MS/MSD samples not addressed in this narrative are unrelated to samples in this report.

With the following exceptions, all sample analyses achieved analytical criteria.

**Client:** Republic Industrial and Energy Solutions, LLC

**Project:** December F039 Leachate- 01.03.23

**Work Order:** 23010078

**Sample ID:** December 2022 F039

**Lab ID:** 23010078-01

**Collection Date:** 1/3/2023 01:52 PM

**Matrix:** LIQUID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PESTICIDES</b>			<b>SW8081B</b>	Prep: SW3511	1/4/23 11:20	Analyst: <b>MMO</b>
Aldrin	ND		0.48	µg/L	50	1/4/2023 03:48 PM
Surr: Decachlorobiphenyl	184	S	42-148	%REC	50	1/4/2023 03:48 PM
Surr: Tetrachloro-m-xylene	500	S	57-141	%REC	50	1/4/2023 03:48 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW846 8270D</b>	Prep: SW3510	1/5/23 13:32	Analyst: <b>EE</b>
N-Nitrosodimethylamine	ND		400	µg/L	20	1/10/2023 07:23 PM
Surr: 2,4,6-Tribromophenol	52.8		47-103	%REC	20	1/10/2023 07:23 PM
Surr: 2-Fluorobiphenyl	30.4	S	41-96	%REC	20	1/10/2023 07:23 PM
Surr: 2-Fluorophenol	20.4	S	28-66	%REC	20	1/10/2023 07:23 PM
Surr: 4-Terphenyl-d14	39.2	S	49-107	%REC	20	1/10/2023 07:23 PM
Surr: Nitrobenzene-d5	53.6		41-95	%REC	20	1/10/2023 07:23 PM
Surr: Phenol-d6	17.6	S	18-44	%REC	20	1/10/2023 07:23 PM
<b>SUBCONTRACTED ANALYSES</b>			<b>SUBCONTRACT</b>			Analyst: <b>ALS</b>
Subcontracted Analyses	See attached			as noted	1	2/13/2023 08:40 AM

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

**Client:** Republic Industrial and Energy Solutions, LLC  
**Work Order:** 23010078  
**Project:** December F039 Leachate- 01.03.23

**QC BATCH REPORT**

Batch ID: **209250** Instrument ID **GC12** Method: **SW8081B**

MBLK		Sample ID: PBLKW1-209250-209250				Units: µg/L		Analysis Date: 1/4/2023 01:57 PM		
Client ID:		Run ID: GC12_230104A				SeqNo: 9167297		Prep Date: 1/4/2023		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	0.2952	0	0.25	0	118	42-148	0			
Surr: Tetrachloro-m-xylene	0.2362	0	0.25	0	94.5	57-141	0			

LCS		Sample ID: PLCSW1-209250-209250				Units: µg/L		Analysis Date: 1/4/2023 02:25 PM		
Client ID:		Run ID: GC12_230104A				SeqNo: 9167299		Prep Date: 1/4/2023		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aldrin	0.2134	0.010	0.2	0	107	51-164	0			
Surr: Decachlorobiphenyl	0.3074	0	0.25	0	123	42-148	0			
Surr: Tetrachloro-m-xylene	0.2454	0	0.25	0	98.2	57-141	0			

LCSD		Sample ID: PLCSDW1-209250-209250				Units: µg/L		Analysis Date: 1/4/2023 02:39 PM		
Client ID:		Run ID: GC12_230104A				SeqNo: 9167300		Prep Date: 1/4/2023		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aldrin	0.2034	0.010	0.2	0	102	51-164	0.2134	4.8	20	
Surr: Decachlorobiphenyl	0.296	0	0.25	0	118	42-148	0.3074	3.78	20	
Surr: Tetrachloro-m-xylene	0.2304	0	0.25	0	92.2	57-141	0.2454	6.31	20	

The following samples were analyzed in this batch: 23010078-01A

Client: Republic Industrial and Energy Solutions, LLC  
 Work Order: 23010078  
 Project: December F039 Leachate- 01.03.23

## QC BATCH REPORT

Batch ID: 209289 Instrument ID SVMS8 Method: SW846 8270D

MBLK		Sample ID: SBLKW1-209289-209289			Units: µg/L		Analysis Date: 1/5/2023 09:20 PM			
Client ID:		Run ID: SVMS8_230105A			SeqNo: 9175187		Prep Date: 1/5/2023		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	26.48	0	50	0	53	47-103	0			
Surr: 2-Fluorobiphenyl	19.94	0	50	0	39.9	41-96	0			S
Surr: 2-Fluorophenol	15.51	0	50	0	31	28-66	0			
Surr: 4-Terphenyl-d14	39.07	0	50	0	78.1	49-107	0			
Surr: Nitrobenzene-d5	24.01	0	50	0	48	41-95	0			
Surr: Phenol-d6	10.1	0	50	0	20.2	18-44	0			

LCS		Sample ID: SLCSW1-209289-209289			Units: µg/L		Analysis Date: 1/5/2023 09:40 PM			
Client ID:		Run ID: SVMS8_230105A			SeqNo: 9175188		Prep Date: 1/5/2023		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
N-Nitrosodimethylamine	8.76	5.0	20	0	43.8	26-74	0			
Surr: 2,4,6-Tribromophenol	36.71	0	50	0	73.4	47-103	0			
Surr: 2-Fluorobiphenyl	27.46	0	50	0	54.9	41-96	0			
Surr: 2-Fluorophenol	18.89	0	50	0	37.8	28-66	0			
Surr: 4-Terphenyl-d14	38.94	0	50	0	77.9	49-107	0			
Surr: Nitrobenzene-d5	30.71	0	50	0	61.4	41-95	0			
Surr: Phenol-d6	12.21	0	50	0	24.4	18-44	0			

LCSD		Sample ID: SLCSDW1-209289-209289			Units: µg/L		Analysis Date: 1/5/2023 10:01 PM			
Client ID:		Run ID: SVMS8_230105A			SeqNo: 9175189		Prep Date: 1/5/2023		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
N-Nitrosodimethylamine	8.39	5.0	20	0	42	26-74	8.76	4.31	30	
Surr: 2,4,6-Tribromophenol	32.72	0	50	0	65.4	47-103	36.71	11.5	40	
Surr: 2-Fluorobiphenyl	23.92	0	50	0	47.8	41-96	27.46	13.8	40	
Surr: 2-Fluorophenol	17.12	0	50	0	34.2	28-66	18.89	9.83	40	
Surr: 4-Terphenyl-d14	35.93	0	50	0	71.9	49-107	38.94	8.04	40	
Surr: Nitrobenzene-d5	26.99	0	50	0	54	41-95	30.71	12.9	40	
Surr: Phenol-d6	11.04	0	50	0	22.1	18-44	12.21	10.1	40	

The following samples were analyzed in this batch:

23010078-01A

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



February 10, 2023

Service Request No:E2300044

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

**Laboratory Results for: 23010078**

Dear Les,

Enclosed are the results of the sample(s) submitted to our laboratory January 12, 2023  
For your reference, these analyses have been assigned our service request number **E2300044**.

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.

Please contact me if you have any questions. My extension is 2188. You may also contact me via email at [James.Guin@alsglobal.com](mailto:James.Guin@alsglobal.com).

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

James Guin

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](http://www.alsglobal.com)

## ALS Environmental

**Client:** ALS Environmental – Holland (MI)                      **Service Request No.:** E2300044  
**Project:** 22120348                                                      **Date Received:** 01/12/23  
**Sample Matrix:** Water

### 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 01/12/23.

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:

EQ2300036: Laboratory Control Spike/Duplicate Laboratory Control Sample (LCS/DLCS) samples were analyzed and reported in addition to/in lieu of a MS/MSD for this extraction batch. The MS/DMS results are included in this report.

##### B flags – Method Blanks

The Method Blank EQ2300036-01 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.

##### 2378-TCDF

Samples analyzed on the DB-5MSUI column were analyzed under conditions where sufficient separation between 2,3,7,8-TCDF and its closest eluter was achieved. Confirmation of this result was not required.

##### Y flags – Cleanup Standard

The recoveries for the cleanup standard, 37Cl-2,3,7,8-TCDD are below control limits. The sample results are not affected since this labeled standard is provided as a means of demonstrating that both the sample extraction and subsequent cleanup steps performed as expected and is not used in quantitation of target analytes.

##### 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.

### **MRL**

Sample results are reported to the Method Reporting Limit (MRL) established by the analytical method. Results that were not detected at concentrations greater than the MRL are reported as "ND" and are flagged appropriately.

### **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:** 23010078

**Service Request:**E2300044

**SAMPLE CROSS-REFERENCE**

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
E2300044-001	December 2022 F039	1/3/2023	1352

## Service Request Summary

**Folder #:** E2300044  
**Client Name:** ALS Environmental - Holland (MI)  
**Project Name:** 23010078  
**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:** James Guin  
**Originating Lab:** HOUSTON  
**Logged By:** CGRANDITS  
**Date Received:** 01/12/23  
**Internal Due Date:** 2/3/2023  
**QAP:** LAB QAP  
**Qualifier Set:** HRMS Qualifier Set  
**Formset:** Lab Standard  
**Merged?:** Y  
**Report to MDL?:** Y  
**P.O. Number:** 23010078  
**EDD:** No EDD Specified

1 250 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved  
**Location:** EHRMS-WIC 9A  
**Pressure Gas:**

Lab Samp No.	Client Samp No	Matrix	Collected
E2300044-001	December 2022 F039	Aqueous Leachate	01/03/23 1352
Dioxins Furans/1613B			II

## Service Request Summary

**Folder #:** E2300044  
**Client Name:** ALS Environmental - Holland (MI)  
**Project Name:** 23010078  
**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

1 250 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved  
**Location:** EHRMS-WIC 9A  
**Pressure Gas:**

**Project Chemist:** James Guin  
**Originating Lab:** HOUSTON  
**Logged By:** CGRANDITS  
**Date Received:** 01/12/23  
**Internal Due Date:** 2/3/2023  
**QAP:** LAB QAP  
**Qualifier Set:** HRMS Qualifier Set  
**Formset:** Lab Standard  
**Merged?:** Y  
**Report to MDL?:** Y  
**P.O. Number:** 23010078  
**EDD:** No EDD Specified

## 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-nois 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

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### 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	LA028-2023	12/31/2023
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	2368363	12/31/2023
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
Utah Department of Health Environmental Laboratory Certification	TX026932022-13	7/31/2023
Washington Department of Ecology	C819-22	11/14/2023

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

SR# Unique ID E2300044

DB-5MSUI

SPB-Octyl

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

Date:	Analyst:	Samples:
02/10/23	LKL	001

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

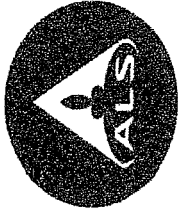
Date:	Analyst:	Samples:
2/10/23	HS	001



## 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](http://www.alsglobal.com)





Subcontractor:  
 ALS Environmental  
 10450 Stancliff Rd  
 Suite 210  
 Houston, TX 77099

TEL: (281) 530-5656  
 FAX: (281) 530-5887  
 Acct #:

# CHAIN-OF-CUSTODY RECORD

Date: 04-Jan-23  
 COC ID: 21883  
 Due Date: 24-Jan-23

Page 1 of 1

Customer Information		ALS/SHN Account		Parameter/Method Request for Analysis											
Project Information		Project Information		Subcontracted Analyses (SUBCONTRACT)											
Purchase Order	Project Name	Project Number	Project Number	A	B	C	D	E	F	G	H	I	J		
Work Order	ALS Group USA, Corp	23010078	23010078												
Company Name	ALS Group USA, Corp	Bill To Company	ALS Group USA, Corp												
Send Report To	Les Arnold	Inv Attn	Accounts Payable												
Address	3352 128th Ave	Address	3352 128th Ave												
City/State/Zip	Holland, Michigan 49424	City/State/Zip	Holland, Michigan 49424												
Phone	(616) 399-6070	Phone	(616) 399-6070												
Fax	(616) 399-6185	Fax	(616) 399-6185												
eMail Address	les.arnold@alsglobal.com	eMail CC													
ALS Sample ID	December 2022 F039	Client Sample ID													
23010078-01B		Matrix	Liquid	X											
		Collection Date 24hr	3/Jan/2023 13:52												
		Bottle	(1) 250AMGNEAT												

**Comments:**

Please analyze the enclosed samples for the attached list of PCDDs/PCDFs. Please provide a standard report and a "CRA 2.5 EDD". Thank you.

*Cooler Red Tempulic ver # 71 WCF-0-5*

Relinquished by: *Cheray Cook*

Date/Time: 1-5-23 2:00pm

Received by: *GM*

Date/Time: 01/12/23

Cooler IDs

Report/OC Level  
 Std



10450 Stancliff Road, Suite 210  
 Houston, TX 77099  
 T: +1 281 530 5656  
 F: +1 281 530 5887  
 www.alsglobal.com

Client: ALS Horizontal Date: 1/17/23 WO#: \_\_\_\_\_

Time Received: 1435 Received by: SM BO#: N/A

Matrices: Solid/Sludge Water Oil Wipes Hydrocarbon Liquid Other

Kit ID/Cooler ID	Trip Blank ID	Cooler Temp (C) Observed/Corrected	IR #	Temp BLK Present?
<u>Pre</u>	<u>-</u>	<u>4.0 / 3.5</u>	<u>7C</u>	<u>Y</u> N
		<u>/</u>		Y N
		<u>/</u>		Y N
		<u>/</u>		Y N
		<u>/</u>		Y N

Delivery Method: FedEx UPS Greyhound ALS Client Other \_\_\_\_\_

Date/Time of Unpacking: 1/17/23 Unpacked by: \_\_\_\_\_

- 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 - Sampler's name present? Yes No
- Chain of Custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- VOA/TX1005/1006 Solids in hermetically Sealed Vials: Yes No No VOA/TX1005/1006 Solid
- 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
- Water - VOA vials have zero headspace? Yes No N/A No VOA submitted
- Non-VOA waters preserved with HCl, H2SO4, HNO3 are pH <2? Yes No N/A
- Waters preserved with NaOH/Ascorbic acid are pH >12? Yes No N/A
- pH adjusted? Yes\* No N/A \*See Preservation Logbook
- pH adjusted by: \_\_\_\_\_ pH Paper Lot: \_\_\_\_\_



10450 Stancliff Rd., Suite 210  
Houston, TX 77099  
T: +1 713 266 1599  
F: +1 713 266 1599  
[www.alsglobal.com](http://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



# 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](http://www.alsglobal.com)

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

**Client:** ALS Environmental - Holland (MI)  
**Project:** 23010078  
**Sample Matrix:** Aqueous Leachate  
**Sample Name:** December 2022 F039  
**Lab Code:** E2300044-001

**Service Request:** E2300044  
**Date Collected:** 01/03/23 13:52  
**Date Received:** 01/12/23 14:35  
**Units:** pg/L  
**Basis:** NA

**Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS**

**Analysis Method:** 1613B  
**Prep Method:** Method Sep Funnel/Jar  
**Sample Amount:** 116mL  
**Data File Name:** P634916  
**ICAL Date:** 03/15/22

**Date Analyzed:** 02/08/23 08:46  
**Date Extracted:** 1/31/23  
**Instrument Name:** E-HRMS-08  
**GC Column:** DB-5MSUI  
**Blank File Name:** P634894  
**Cal Ver. File Name:** P634906

**Native Analyte Results**

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	65.8		14.0	43.1	0.76	1.001	1
1,2,3,7,8-PeCDD	115J		5.66	216	1.68	1.000	1
1,2,3,4,7,8-HxCDD	88.1J		3.70	216	1.14	1.000	1
1,2,3,6,7,8-HxCDD	225		3.54	216	1.43	1.000	1
1,2,3,7,8,9-HxCDD	82.5JK		3.48	216	0.85	1.006	1
1,2,3,4,6,7,8-HpCDD	2430		25.8	216	1.09	1.000	1
OCDD	18700		40.9	431	0.89	1.000	1
2,3,7,8-TCDF	556		11.1	43.1	0.67	1.001	1
1,2,3,7,8-PeCDF	3240		71.1	216	1.57	1.001	1
2,3,4,7,8-PeCDF	3190		75.8	216	1.57	1.000	1
1,2,3,4,7,8-HxCDF	28900		64.0	216	1.22	1.000	1
1,2,3,6,7,8-HxCDF	9270		73.4	216	1.19	1.000	1
1,2,3,7,8,9-HxCDF	932		104	216	1.14	1.001	1
2,3,4,6,7,8-HxCDF	2060		63.8	216	1.26	1.000	1
1,2,3,4,6,7,8-HpCDF	196000		382	1080	0.99	1.000	5
1,2,3,4,7,8,9-HpCDF	4630		86.0	216	1.01	1.000	1
OCDF	252000		10.6	431	0.86	1.005	1

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

**Client:** ALS Environmental - Holland (MI)  
**Project:** 23010078  
**Sample Matrix:** Aqueous Leachate  
**Sample Name:** December 2022 F039  
**Lab Code:** E2300044-001

**Service Request:** E2300044  
**Date Collected:** 01/03/23 13:52  
**Date Received:** 01/12/23 14:35  
**Units:** pg/L  
**Basis:** NA

**Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS**

**Analysis Method:** 1613B  
**Prep Method:** Method Sep Funnel/Jar  
**Sample Amount:** 116mL  
**Data File Name:** P634916  
**ICAL Date:** 03/15/22

**Date Analyzed:** 02/08/23 08:46  
**Date Extracted:** 1/31/23  
**Instrument Name:** E-HRMS-08  
**GC Column:** DB-5MSUI  
**Blank File Name:** P634894  
**Cal Ver. File Name:** P634906

**Native Analyte Results**

<b>Analyte Name</b>	<b>Result</b>	<b>Q</b>	<b>EDL</b>	<b>MRL</b>	<b>Ion Ratio</b>	<b>RRT</b>	<b>Dilution Factor</b>
Total Tetra-Dioxins	1180		14.0	43.1	0.79		1
Total Penta-Dioxins	416		5.66	216	1.39		1
Total Hexa-Dioxins	2070		3.57	216	1.22		1
Total Hepta-Dioxins	4980		25.8	216	1.09		1
Total Tetra-Furans	32100		11.1	43.1	0.77		1
Total Penta-Furans	46900		5.40	216	1.61		1
Total Hexa-Furans	83100		73.5	216	1.20		1
Total Hepta-Furans	197000		84.2	216	0.99		1

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

**Client:** ALS Environmental - Holland (MI)  
**Project:** 23010078  
**Sample Matrix:** Aqueous Leachate  
**Sample Name:** December 2022 F039  
**Lab Code:** E2300044-001

**Service Request:** E2300044  
**Date Collected:** 01/03/23 13:52  
**Date Received:** 01/12/23 14:35  
**Units:** Percent  
**Basis:** NA

**Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS**

**Analysis Method:** 1613B  
**Prep Method:** Method Sep Funnel/Jar  
**Sample Amount:** 116mL  
**Data File Name:** P634916  
**ICAL Date:** 03/15/22

**Date Analyzed:** 02/08/23 08:46  
**Date Extracted:** 1/31/23  
**Instrument Name:** E-HRMS-08  
**GC Column:** DB-5MSUI  
**Blank File Name:** P634894  
**Cal Ver. File Name:** P634906

**Labeled Standard Results**

<b>Labeled Compounds</b>	<b>Spike Conc.(pg)</b>	<b>Conc. Found (pg)</b>	<b>% Rec</b>	<b>Q</b>	<b>Control Limits</b>	<b>Ion Ratio</b>	<b>RRT</b>
13C-2,3,7,8-TCDD	2000	1808.299	90		25-164	0.76	1.019
13C-1,2,3,7,8-PeCDD	2000	1541.594	77		25-181	1.57	1.172
13C-1,2,3,4,7,8-HxCDD	2000	1660.859	83		32-141	1.26	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1819.370	91		28-130	1.24	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1633.723	82		23-140	1.06	1.066
13C-OCDD	4000	2123.402	53		17-157	0.89	1.142
13C-2,3,7,8-TCDF	2000	1672.293	84		24-169	0.79	0.994
13C-1,2,3,7,8-PeCDF	2000	1758.654	88		24-185	1.60	1.132
13C-2,3,4,7,8-PeCDF	2000	1604.091	80		21-178	1.58	1.163
13C-1,2,3,4,7,8-HxCDF	2000	1847.092	92		26-152	0.52	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1567.753	78		26-123	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1330.281	67		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1946.160	97		28-136	0.50	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1295.111	65		28-143	0.44	1.042
13C-1,2,3,4,7,8,9-HpCDF	2000	1606.773	80		26-138	0.43	1.079
37Cl-2,3,7,8-TCDD	800	577.766	72		35-197	NA	1.020

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

**Client:** ALS Environmental - Holland (MI)  
**Project:** 23010078  
**Sample Matrix:** Aqueous Leachate

**Service Request:** E2300044  
**Date Collected:** 01/03/23 13:52  
**Date Received:** 01/12/23 14:35

**Sample Name:** December 2022 F039  
**Lab Code:** E2300044-001

**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**

<b>Analyte Name</b>	<b>Result</b>	<b>DL</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>TEF</b>	<b>TEF - Adjusted Concentration</b>
2,3,7,8-TCDD	65.8	14.0	43.1	1	1	65.8
1,2,3,7,8-PeCDD	115	5.66	216	1	1	115
1,2,3,4,7,8-HxCDD	88.1	3.70	216	1	0.1	8.81
1,2,3,6,7,8-HxCDD	225	3.54	216	1	0.1	22.5
1,2,3,7,8,9-HxCDD	82.5	3.48	216	1	0.1	8.25
1,2,3,4,6,7,8-HpCDD	2430	25.8	216	1	0.01	24.3
OCDD	18700	40.9	431	1	0.0003	5.61
2,3,7,8-TCDF	556	11.1	43.1	1	0.1	55.6
1,2,3,7,8-PeCDF	3240	71.1	216	1	0.03	97.2
2,3,4,7,8-PeCDF	3190	75.8	216	1	0.3	957
1,2,3,4,7,8-HxCDF	28900	64.0	216	1	0.1	2890
1,2,3,6,7,8-HxCDF	9270	73.4	216	1	0.1	927
1,2,3,7,8,9-HxCDF	932	104	216	1	0.1	93.2
2,3,4,6,7,8-HxCDF	2060	63.8	216	1	0.1	206
1,2,3,4,6,7,8-HpCDF	196000	382	1080	5	0.01	1960
1,2,3,4,7,8,9-HpCDF	4630	86.0	216	1	0.01	46.3
OCDF	252000	10.6	431	1	0.0003	75.6
<b>Total TEQ</b>						<b>7560</b>

2005 WHO TEFs, ND = 0



**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

**Client:** ALS Environmental - Holland (MI)  
**Project:** 23010078  
**Sample Matrix:** Aqueous Leachate  
**Sample Name:** Method Blank  
**Lab Code:** EQ2300036-01

**Service Request:** E2300044  
**Date Collected:** NA  
**Date Received:** NA  
**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  
**Data File Name:** P634894  
**ICAL Date:** 03/15/22

**Date Analyzed:** 02/07/23 13:56  
**Date Extracted:** 1/31/23  
**Instrument Name:** E-HRMS-08  
**GC Column:** DB-5MSUI  
**Blank File Name:** P634894  
**Cal Ver. File Name:** P634891

**Native Analyte Results**

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	1.94	5.00			1
1,2,3,7,8-PeCDD	1.16JK		0.774	25.0	2.19	1.001	1
1,2,3,4,7,8-HxCDD	3.07J		0.429	25.0	1.12	1.000	1
1,2,3,6,7,8-HxCDD	1.77JK		0.419	25.0	0.98	1.000	1
1,2,3,7,8,9-HxCDD	1.30JK		0.408	25.0	1.48	1.007	1
1,2,3,4,6,7,8-HpCDD	5.97JK		0.521	25.0	1.40	1.000	1
OCDD	50.2		1.52	50.0	0.92	1.000	1
2,3,7,8-TCDF	ND	U	1.23	5.00			1
1,2,3,7,8-PeCDF	1.26J		0.408	25.0	1.35	1.001	1
2,3,4,7,8-PeCDF	1.34J		0.435	25.0	1.73	1.000	1
1,2,3,4,7,8-HxCDF	1.40JK		0.368	25.0	0.86	1.000	1
1,2,3,6,7,8-HxCDF	1.37JK		0.401	25.0	1.72	1.000	1
1,2,3,7,8,9-HxCDF	2.53JK		0.425	25.0	1.03	1.001	1
2,3,4,6,7,8-HxCDF	1.58J		0.335	25.0	1.38	1.000	1
1,2,3,4,6,7,8-HpCDF	5.64JK		0.584	25.0	1.28	1.000	1
1,2,3,4,7,8,9-HpCDF	2.83J		0.594	25.0	0.89	1.000	1
OCDF	58.8		1.82	50.0	0.77	1.005	1

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

**Client:** ALS Environmental - Holland (MI)  
**Project:** 23010078  
**Sample Matrix:** Aqueous Leachate

**Service Request:** E2300044  
**Date Collected:** NA  
**Date Received:** NA

**Sample Name:** Method Blank  
**Lab Code:** EQ2300036-01

**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:** 02/07/23 13:56  
**Date Extracted:** 1/31/23  
**Instrument Name:** E-HRMS-08  
**GC Column:** DB-5MSUI  
**Blank File Name:** P634894  
**Cal Ver. File Name:** P634891

**Data File Name:** P634894  
**ICAL Date:** 03/15/22

**Native Analyte Results**

<b>Analyte Name</b>	<b>Result</b>	<b>Q</b>	<b>EDL</b>	<b>MRL</b>	<b>Ion Ratio</b>	<b>RRT</b>	<b>Dilution Factor</b>
Total Tetra-Dioxins	ND	U	1.94	5.00			1
Total Penta-Dioxins	ND	U	0.774	25.0			1
Total Hexa-Dioxins	4.10J		0.418	25.0	1.12		1
Total Hepta-Dioxins	7.44J		0.521	25.0	1.10		1
Total Tetra-Furans	ND	U	1.23	5.00			1
Total Penta-Furans	2.99J		0.421	25.0	1.65		1
Total Hexa-Furans	1.58J		0.379	25.0	1.38		1
Total Hepta-Furans	2.83J		0.588	25.0	0.89		1

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

**Client:** ALS Environmental - Holland (MI)  
**Project:** 23010078  
**Sample Matrix:** Aqueous Leachate

**Service Request:** E2300044  
**Date Collected:** NA  
**Date Received:** NA

**Sample Name:** Method Blank  
**Lab Code:** EQ2300036-01

**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:** 02/07/23 13:56  
**Date Extracted:** 1/31/23  
**Instrument Name:** E-HRMS-08  
**GC Column:** DB-5MSUI  
**Blank File Name:** P634894  
**Cal Ver. File Name:** P634891

**Data File Name:** P634894  
**ICAL Date:** 03/15/22

**Labeled Standard Results**

<b>Labeled Compounds</b>	<b>Spike Conc.(pg)</b>	<b>Conc. Found (pg)</b>	<b>% Rec</b>	<b>Q</b>	<b>Control Limits</b>	<b>Ion Ratio</b>	<b>RRT</b>
13C-2,3,7,8-TCDD	2000	1085.250	54		25-164	0.78	1.019
13C-1,2,3,7,8-PeCDD	2000	1261.200	63		25-181	1.61	1.172
13C-1,2,3,4,7,8-HxCDD	2000	1395.188	70		32-141	1.26	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1447.882	72		28-130	1.28	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1427.884	71		23-140	1.07	1.066
13C-OCDD	4000	2143.185	54		17-157	0.87	1.142
13C-2,3,7,8-TCDF	2000	955.359	48		24-169	0.79	0.994
13C-1,2,3,7,8-PeCDF	2000	1330.997	67		24-185	1.58	1.132
13C-2,3,4,7,8-PeCDF	2000	1239.561	62		21-178	1.58	1.163
13C-1,2,3,4,7,8-HxCDF	2000	1425.288	71		26-152	0.53	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1214.904	61		26-123	0.51	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1352.920	68		29-147	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1562.868	78		28-136	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1095.191	55		28-143	0.43	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1415.802	71		26-138	0.44	1.079
37Cl-2,3,7,8-TCDD	800	384.707	48		35-197	NA	1.020



## Accuracy & Precision

**ALS Environmental - Houston HRMS**  
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Phone (713)266-1599 Fax (713)266-0130  
[www.alsglobal.com](http://www.alsglobal.com)

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** ALS Environmental - Holland (MI)  
**Project:** 23010078  
**Sample Matrix:** Aqueous Leachate

**Service Request:** E2300044  
**Date Analyzed:** 02/07/23  
**Date Extracted:** 01/31/23

**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:** 794263

**Lab Control Sample**  
**EQ2300036-02**

**Duplicate Lab Control Sample**  
**EQ2300036-03**

Analyte Name	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,2,3,4,6,7,8-HpCDD	871	1000	87	858	1000	86	70-140	1	50
1,2,3,4,7,8-HxCDD	1020	1000	102	989	1000	99	70-164	3	50
1,2,3,6,7,8-HxCDD	940	1000	94	924	1000	92	76-134	2	50
1,2,3,7,8,9-HxCDD	1070	1000	107	1050	1000	105	64-162	2	50
1,2,3,7,8-PeCDD	1040	1000	104	1030	1000	103	70-142	1	50
2,3,7,8-TCDD	165	200	82	166	200	83	67-158	<1	50
OCDD	2150	2000	108	2050	2000	102	78-144	5	50
1,2,3,4,6,7,8-HpCDF	981	1000	98	975	1000	98	82-122	<1	50
1,2,3,4,7,8,9-HpCDF	886	1000	89	836	1000	84	78-138	6	50
1,2,3,4,7,8-HxCDF	883	1000	88	865	1000	87	72-134	2	50
1,2,3,6,7,8-HxCDF	989	1000	99	950	1000	95	84-130	4	50
1,2,3,7,8,9-HxCDF	985	1000	98	976	1000	98	78-130	<1	50
1,2,3,7,8-PeCDF	895	1000	90	887	1000	89	80-134	<1	50
2,3,4,6,7,8-HxCDF	815	1000	82	799	1000	80	70-156	2	50
2,3,4,7,8-PeCDF	995	1000	100	971	1000	97	68-160	2	50
2,3,7,8-TCDF	186	200	93	181	200	91	75-158	3	50
OCDF	2190	2000	109	2020	2000	101	63-170	8	50

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

**Client:** ALS Environmental - Holland (MI)  
**Project:** 23010078  
**Sample Matrix:** Aqueous Leachate

**Service Request:** E2300044  
**Date Collected:** NA  
**Date Received:** NA

**Sample Name:** Lab Control Sample  
**Lab Code:** EQ2300036-02

**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:** 02/07/23 21:42  
**Date Extracted:** 1/31/23  
**Instrument Name:** E-HRMS-08  
**GC Column:** DB-5MSUI  
**Blank File Name:** P634894  
**Cal Ver. File Name:** P634891

**Data File Name:** P634903  
**ICAL Date:** 03/15/22

**Native Analyte Results**

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	165		2.48	5.00	0.78	1.001	1
1,2,3,7,8-PeCDD	1040		1.71	25.0	1.54	1.000	1
1,2,3,4,7,8-HxCDD	1020		0.741	25.0	1.23	1.000	1
1,2,3,6,7,8-HxCDD	940		0.722	25.0	1.26	1.000	1
1,2,3,7,8,9-HxCDD	1070		0.703	25.0	1.28	1.007	1
1,2,3,4,6,7,8-HpCDD	871		0.847	25.0	1.03	1.000	1
OCDD	2150		5.37	50.0	0.88	1.000	1
2,3,7,8-TCDF	186		1.83	5.00	0.77	1.001	1
1,2,3,7,8-PeCDF	895		0.564	25.0	1.56	1.001	1
2,3,4,7,8-PeCDF	995		0.589	25.0	1.50	1.000	1
1,2,3,4,7,8-HxCDF	883		0.486	25.0	1.23	1.000	1
1,2,3,6,7,8-HxCDF	989		0.524	25.0	1.24	1.000	1
1,2,3,7,8,9-HxCDF	985		0.593	25.0	1.22	1.000	1
2,3,4,6,7,8-HxCDF	815		0.441	25.0	1.24	1.000	1
1,2,3,4,6,7,8-HpCDF	981		1.34	25.0	0.99	1.000	1
1,2,3,4,7,8,9-HpCDF	886		1.30	25.0	0.96	1.000	1
OCDF	2190		9.66	50.0	0.86	1.005	1

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

**Client:** ALS Environmental - Holland (MI)  
**Project:** 23010078  
**Sample Matrix:** Aqueous Leachate  
**Sample Name:** Lab Control Sample  
**Lab Code:** EQ2300036-02

**Service Request:** E2300044  
**Date Collected:** NA  
**Date Received:** NA  
**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  
**Data File Name:** P634903  
**ICAL Date:** 03/15/22

**Date Analyzed:** 02/07/23 21:42  
**Date Extracted:** 1/31/23  
**Instrument Name:** E-HRMS-08  
**GC Column:** DB-5MSUI  
**Blank File Name:** P634894  
**Cal Ver. File Name:** P634891

**Native Analyte Results**

<b>Analyte Name</b>	<b>Result</b>	<b>Q</b>	<b>EDL</b>	<b>MRL</b>	<b>Ion Ratio</b>	<b>RRT</b>	<b>Dilution Factor</b>
Total Tetra-Dioxins	165		2.48	5.00	0.78		1
Total Penta-Dioxins	1040		1.71	25.0	1.54		1
Total Hexa-Dioxins	3020		0.722	25.0	1.23		1
Total Hepta-Dioxins	872		0.847	25.0	0.94		1
Total Tetra-Furans	186		1.83	5.00	0.74		1
Total Penta-Furans	1890		0.576	25.0	1.56		1
Total Hexa-Furans	3680		0.505	25.0	1.23		1
Total Hepta-Furans	1890		1.32	25.0	0.99		1

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

**Client:** ALS Environmental - Holland (MI)  
**Project:** 23010078  
**Sample Matrix:** Aqueous Leachate  
**Sample Name:** Lab Control Sample  
**Lab Code:** EQ2300036-02

**Service Request:** E2300044  
**Date Collected:** NA  
**Date Received:** NA  
**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  
**Data File Name:** P634903  
**ICAL Date:** 03/15/22

**Date Analyzed:** 02/07/23 21:42  
**Date Extracted:** 1/31/23  
**Instrument Name:** E-HRMS-08  
**GC Column:** DB-5MSUI  
**Blank File Name:** P634894  
**Cal Ver. File Name:** P634891

**Labeled Standard Results**

<b>Labeled Compounds</b>	<b>Spike Conc.(pg)</b>	<b>Conc. Found (pg)</b>	<b>% Rec</b>	<b>Q</b>	<b>Control Limits</b>	<b>Ion Ratio</b>	<b>RRT</b>
13C-2,3,7,8-TCDD	2000	1425.524	71		25-164	0.77	1.019
13C-1,2,3,7,8-PeCDD	2000	1312.863	66		25-181	1.56	1.172
13C-1,2,3,4,7,8-HxCDD	2000	1296.985	65		32-141	1.25	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1326.713	66		28-130	1.26	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1176.953	59		23-140	1.05	1.066
13C-OCDD	4000	1590.386	40		17-157	0.89	1.142
13C-2,3,7,8-TCDF	2000	1257.558	63		24-169	0.79	0.994
13C-1,2,3,7,8-PeCDF	2000	1490.768	75		24-185	1.60	1.132
13C-2,3,4,7,8-PeCDF	2000	1405.728	70		21-178	1.58	1.163
13C-1,2,3,4,7,8-HxCDF	2000	1344.772	67		26-152	0.49	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1167.072	58		26-123	0.53	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1230.660	62		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1508.071	75		28-136	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	894.388	45		28-143	0.42	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1192.274	60		26-138	0.44	1.079
37Cl-2,3,7,8-TCDD	800	557.381	70		35-197	NA	1.020



**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

**Client:** ALS Environmental - Holland (MI)  
**Project:** 23010078  
**Sample Matrix:** Aqueous Leachate  
**Sample Name:** Duplicate Lab Control Sample  
**Lab Code:** EQ2300036-03

**Service Request:** E2300044  
**Date Collected:** NA  
**Date Received:** NA  
**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  
**Data File Name:** P634904  
**ICAL Date:** 03/15/22

**Date Analyzed:** 02/07/23 22:32  
**Date Extracted:** 1/31/23  
**Instrument Name:** E-HRMS-08  
**GC Column:** DB-5MSUI  
**Blank File Name:** P634894  
**Cal Ver. File Name:** P634891

**Native Analyte Results**

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	166		2.27	5.00	0.76	1.001	1
1,2,3,7,8-PeCDD	1030		0.958	25.0	1.59	1.000	1
1,2,3,4,7,8-HxCDD	989		0.821	25.0	1.24	1.000	1
1,2,3,6,7,8-HxCDD	924		0.723	25.0	1.22	1.000	1
1,2,3,7,8,9-HxCDD	1050		0.739	25.0	1.32	1.006	1
1,2,3,4,6,7,8-HpCDD	858		1.08	25.0	1.05	1.000	1
OCDD	2050		5.79	50.0	0.86	1.000	1
2,3,7,8-TCDF	181		1.54	5.00	0.77	1.001	1
1,2,3,7,8-PeCDF	887		1.05	25.0	1.57	1.001	1
2,3,4,7,8-PeCDF	971		1.13	25.0	1.60	1.000	1
1,2,3,4,7,8-HxCDF	865		0.650	25.0	1.22	1.000	1
1,2,3,6,7,8-HxCDF	950		0.694	25.0	1.25	1.000	1
1,2,3,7,8,9-HxCDF	976		0.876	25.0	1.18	1.000	1
2,3,4,6,7,8-HxCDF	799		0.588	25.0	1.24	1.000	1
1,2,3,4,6,7,8-HpCDF	975		1.31	25.0	0.98	1.000	1
1,2,3,4,7,8,9-HpCDF	836		1.38	25.0	1.02	1.000	1
OCDF	2020		4.69	50.0	0.89	1.005	1

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

**Client:** ALS Environmental - Holland (MI)  
**Project:** 23010078  
**Sample Matrix:** Aqueous Leachate  
**Sample Name:** Duplicate Lab Control Sample  
**Lab Code:** EQ2300036-03

**Service Request:** E2300044  
**Date Collected:** NA  
**Date Received:** NA  
**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  
**Data File Name:** P634904  
**ICAL Date:** 03/15/22

**Date Analyzed:** 02/07/23 22:32  
**Date Extracted:** 1/31/23  
**Instrument Name:** E-HRMS-08  
**GC Column:** DB-5MSUI  
**Blank File Name:** P634894  
**Cal Ver. File Name:** P634891

**Native Analyte Results**

<b>Analyte Name</b>	<b>Result</b>	<b>Q</b>	<b>EDL</b>	<b>MRL</b>	<b>Ion Ratio</b>	<b>RRT</b>	<b>Dilution Factor</b>
Total Tetra-Dioxins	166		2.27	5.00	0.76		1
Total Penta-Dioxins	1030		0.958	25.0	1.59		1
Total Hexa-Dioxins	2960		0.758	25.0	1.24		1
Total Hepta-Dioxins	858		1.08	25.0	1.05		1
Total Tetra-Furans	182		1.54	5.00	0.69		1
Total Penta-Furans	1880		1.09	25.0	1.32		1
Total Hexa-Furans	3590		0.688	25.0	1.22		1
Total Hepta-Furans	1810		1.34	25.0	0.98		1

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

**Client:** ALS Environmental - Holland (MI)  
**Project:** 23010078  
**Sample Matrix:** Aqueous Leachate  
**Sample Name:** Duplicate Lab Control Sample  
**Lab Code:** EQ2300036-03

**Service Request:** E2300044  
**Date Collected:** NA  
**Date Received:** NA  
**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  
**Data File Name:** P634904  
**ICAL Date:** 03/15/22

**Date Analyzed:** 02/07/23 22:32  
**Date Extracted:** 1/31/23  
**Instrument Name:** E-HRMS-08  
**GC Column:** DB-5MSUI  
**Blank File Name:** P634894  
**Cal Ver. File Name:** P634891

**Labeled Standard Results**

<b>Labeled Compounds</b>	<b>Spike Conc.(pg)</b>	<b>Conc. Found (pg)</b>	<b>% Rec</b>	<b>Q</b>	<b>Control Limits</b>	<b>Ion Ratio</b>	<b>RRT</b>
13C-2,3,7,8-TCDD	2000	1337.911	67		25-164	0.78	1.019
13C-1,2,3,7,8-PeCDD	2000	1147.396	57		25-181	1.61	1.172
13C-1,2,3,4,7,8-HxCDD	2000	1067.376	53		32-141	1.25	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1220.731	61		28-130	1.23	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1140.596	57		23-140	1.07	1.066
13C-OCDD	4000	1796.869	45		17-157	0.91	1.142
13C-2,3,7,8-TCDF	2000	1228.889	61		24-169	0.78	0.994
13C-1,2,3,7,8-PeCDF	2000	1314.366	66		24-185	1.57	1.133
13C-2,3,4,7,8-PeCDF	2000	1194.609	60		21-178	1.55	1.163
13C-1,2,3,4,7,8-HxCDF	2000	1185.878	59		26-152	0.49	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1093.927	55		26-123	0.53	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1006.395	50		29-147	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1352.047	68		28-136	0.51	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	876.857	44		28-143	0.44	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1084.989	54		26-138	0.43	1.079
37Cl-2,3,7,8-TCDD	800	513.645	64		35-197	NA	1.020



Sample Receipt Checklist

Client Name: **REPULCINDUSTRIAL - ROMULU**

Date/Time Received: **03-Jan-23 20:00**

Work Order: **23010078**

Received by: **DS**

Checklist completed by **Diane Shaw**

04-Jan-23

Reviewed by: **Chelsey Cook**

05-Jan-23

eSignature

Date

eSignature

Date

Matrices: Liquid  
Carrier name: Courier

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	4.1/5.1 c		IR3
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	1/4/2023 9:05:49 AM		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:			

Login Notes:



Client Contacted: \_\_\_\_\_ Date Contacted: \_\_\_\_\_ Person Contacted: \_\_\_\_\_  
 Contacted By: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments:

CorrectiveAction: