



**Environmental GEO-Technologies, LLC**

January 31, 2018

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

Re: EGT Monthly Report (in conformance with MI-163-1W-C010 & MI-163-1W-C011)

Dear Mr. Batka:

Environmental Geo-Technologies, LLC ("EGT") hereby timely submits its fiftieth Monthly Report ("MR") in conformance with the requirements of its two EPA UIC permits (#s MI-163-1W-C010 & MI-163-1W-C011).

EGT is providing all of 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.

EGT did not accept any F039 waste in December 2017 so no Page A-3 of 3 laboratory analyses are necessary to be submitted as part of this MR.

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 inquiry of the person or persons who manage the system, or those persons directly responsible for gathering 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 interim report satisfactory, however, if you have any questions or comments, please feel free to contact us.

Sincerely,

Richard J. Powais, P.E.  
Vice-President

cc: J. Frost (EGT), T. Athans (EGT), P. Sullivan (EGT)

att.

rjp01311817/EGTEPAMonthlyReport-December, 2017

## **AVERAGE INJECTION RATE**

Calculation of Average Injection Rate

CURRENT REPORTING YEAR 2017

CURRENT REPORTING MONTH DECEMBER

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

CURRENT MONTH (all volumes in gallons)

	Injected Waste	Injected Non-Waste	Total injected
MI-163-1W-C010, Well #1-12			
Current Month	271,296	0	271,296
Since facility first injected			13,464,213
MI-163-1W-C011, Well #2-12			
Current Month		0	0
Since facility first injected			4,648,736
		Lifetime Combined	18,112,949

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 49

49 lifetime number of months of injection × 43,830 minutes/month  
= 2,147,670 minutes of injection

Lifetime combined injected volume 18,112,949 ÷ 2,147,670 minutes of injection  
= 8.4 gpm average injection rate

## WELL 1 DATA

WELL 01 Monthly Data

Date	Min Injection Pressure (PSIG)	Max Injection Pressure (PSIG)	Min Sight Glass Level (in)	Max Sight Glass Level (in)	Min Annulus Pressure (PSIG)	Max Annulus Pressure (PSIG)	Min Injectate pH	Max Injectate pH	Min Flow Rate (GPM)	Max Flow Rate (GPM)	Min Differential Pressure (PSIG)	Max Differential Pressure (PSIG)
12/1/2017	-10.0	259.4	16.1	17.3	595.8	795.4	6.9	6.9	5.8	225.3	479.5	703.2
12/2/2017	-10.0	-10.0	16.1	17.2	657.2	680.7	6.9	6.9	0.0	0.0	667.2	690.7
12/3/2017	-10.0	-10.0	16.0	17.2	680.6	685.1	2.3	6.9	0.0	0.0	690.6	695.1
12/4/2017	-10.0	422.4	16.1	17.1	678.6	887.2	0.7	2.3	7.4	122.7	456.2	723.1
12/5/2017	-8.6	513.3	16.5	17.6	676.7	921.5	2.3	7.3	8.9	158.2	398.3	703.5
12/6/2017	104.0	449.5	16.1	17.4	602.5	875.7	7.2	7.2	6.8	218.1	418.2	696.5
12/7/2017	3.9	455.8	16.0	17.1	604.3	907.6	7.2	7.2	13.3	143.3	403.6	695.5
12/8/2017	-10.0	426.3	16.5	17.2	647.0	888.1	7.2	7.2	0.7	110.6	461.7	690.2
12/9/2017	-10.0	-9.3	16.6	17.1	687.5	685.7	7.2	7.2	0.0	0.0	677.5	695.1
12/10/2017	-9.4	-8.8	16.1	17.4	685.6	687.8	7.2	7.2	0.0	0.0	694.9	696.7
12/11/2017	-8.9	674.8	16.0	16.6	672.1	985.7	7.2	7.2	13.0	102.8	308.3	698.4
12/12/2017	6.6	438.8	16.0	16.3	674.3	873.7	0.6	0.6	3.3	32.0	434.1	692.6
12/13/2017	5.9	6.7	16.0	16.5	699.2	704.0	0.6	1.4	0.0	0.0	692.5	698.0
12/14/2017	4.4	6.0	16.0	16.7	703.9	705.5	1.4	1.4	0.0	0.0	697.9	701.0
12/15/2017	4.4	4.6	16.0	16.9	705.3	706.0	1.4	1.4	0.0	0.0	700.7	701.6
12/16/2017	4.2	4.6	15.9	16.3	705.9	706.9	2.9	2.9	0.0	0.0	701.5	702.6
12/17/2017	4.2	4.5	15.9	16.3	706.7	707.0	1.2	3.0	0.0	0.0	702.3	702.7
12/18/2017	-10.0	695.8	16.0	17.1	679.4	992.6	2.2	2.2	16.6	56.1	285.6	704.6
12/19/2017	-10.0	437.0	16.1	17.0	683.0	906.9	2.2	2.2	3.3	115.4	469.9	709.9
12/20/2017	-8.1	526.2	16.0	17.1	675.8	937.7	2.2	2.2	5.1	114.6	406.7	703.6
12/21/2017	-10.0	752.6	16.0	16.9	658.8	1110.2	2.2	2.2	10.7	137.7	315.7	739.4
12/22/2017	-10.0	-7.4	15.9	16.3	677.4	684.4	2.2	2.2	0.0	43.8	687.2	692.6
12/23/2017	-7.9	-7.3	15.9	16.3	680.9	681.9	2.2	6.7	0.0	0.0	688.5	689.4
12/24/2017	-7.4	-6.3	16.0	16.3	681.3	681.7	6.6	6.7	0.0	0.0	687.6	689.0
12/25/2017	-6.4	-5.7	16.0	16.3	681.1	681.5	1.3	6.6	0.0	0.0	686.8	687.8
12/26/2017	-9.9	757.4	16.0	16.7	593.2	1005.5	1.7	1.7	8.8	128.3	-76.6	688.8
12/27/2017	-10.0	748.6	15.8	16.9	653.1	1066.0	1.3	1.4	11.8	134.0	289.0	707.2
12/28/2017	23.5	25.9	15.7	16.7	704.2	705.5	1.1	1.4	0.0	0.0	679.2	681.0
12/29/2017	-9.3	752.5	16.2	17.1	634.5	1192.2	1.4	1.4	12.2	75.9	302.9	835.5
12/30/2017	-4.4	-3.9	16.0	16.8	694.7	707.2	1.1	1.2	0.0	0.0	699.0	711.3
12/31/2017	-4.4	-4.0	16.1	16.6	692.5	694.8	1.3	1.3	0.0	0.0	696.5	699.1

## 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

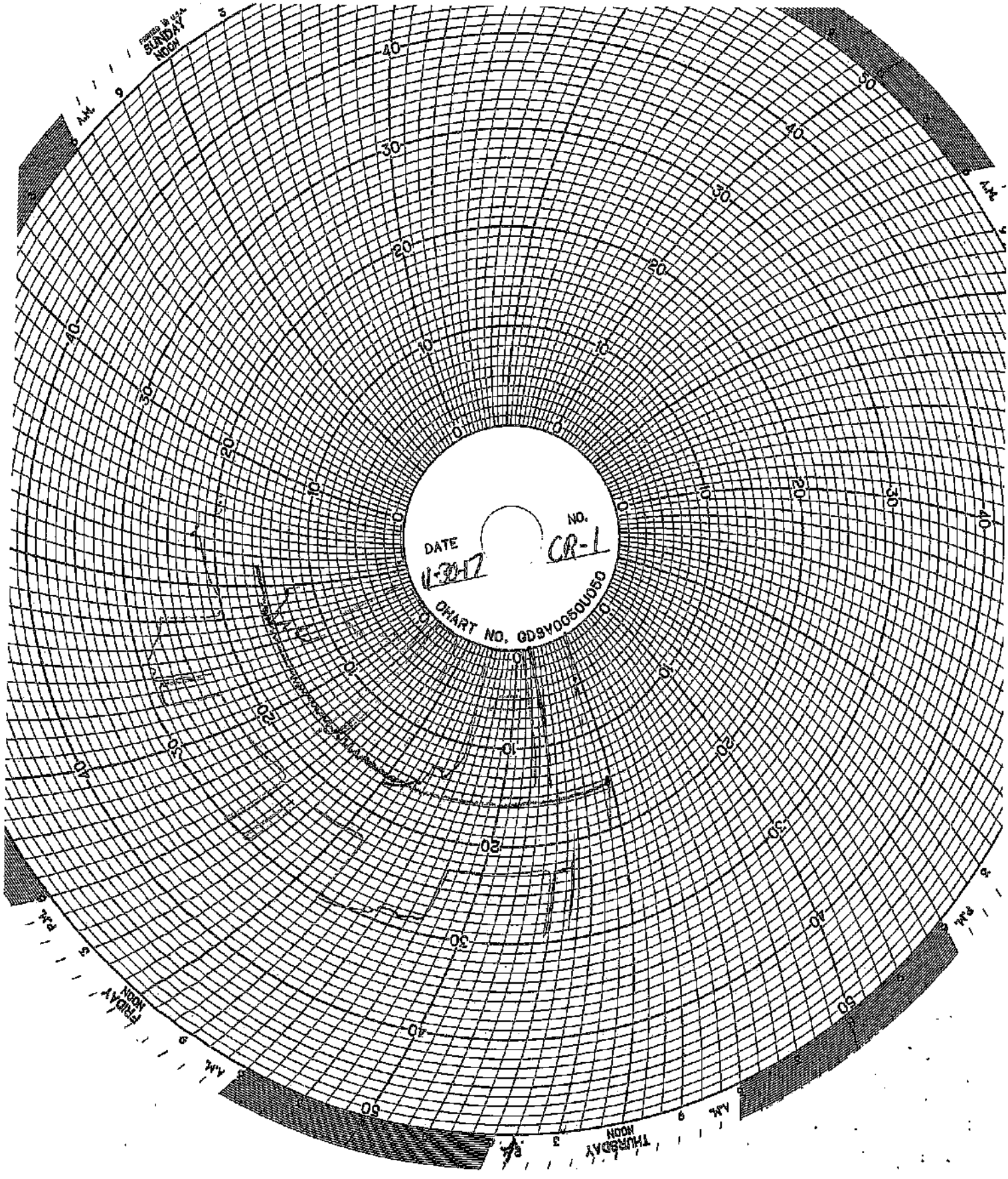
**Green Pen** - Well 2 Monthly Volume (chart value x 100,000)

Channel #4

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

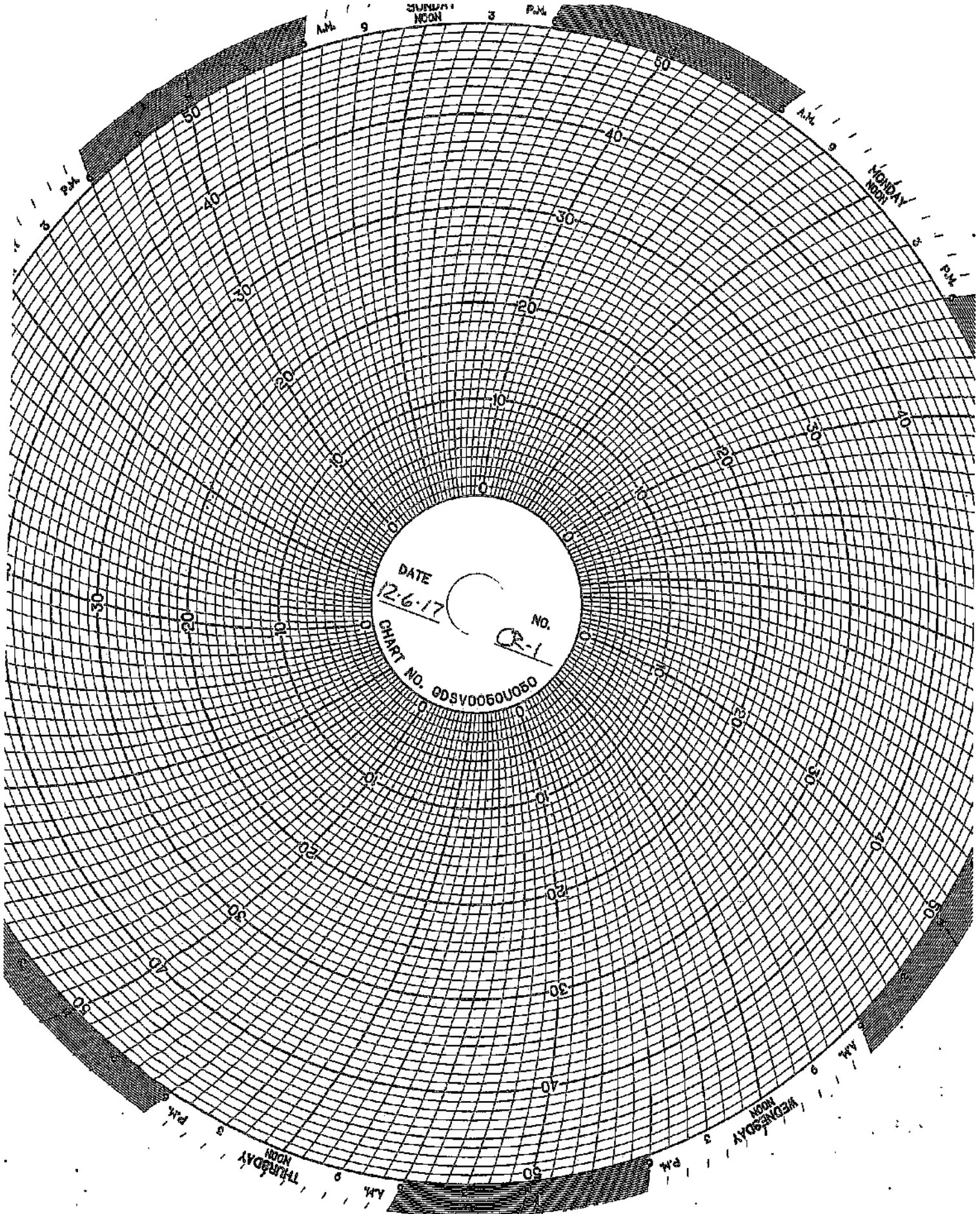
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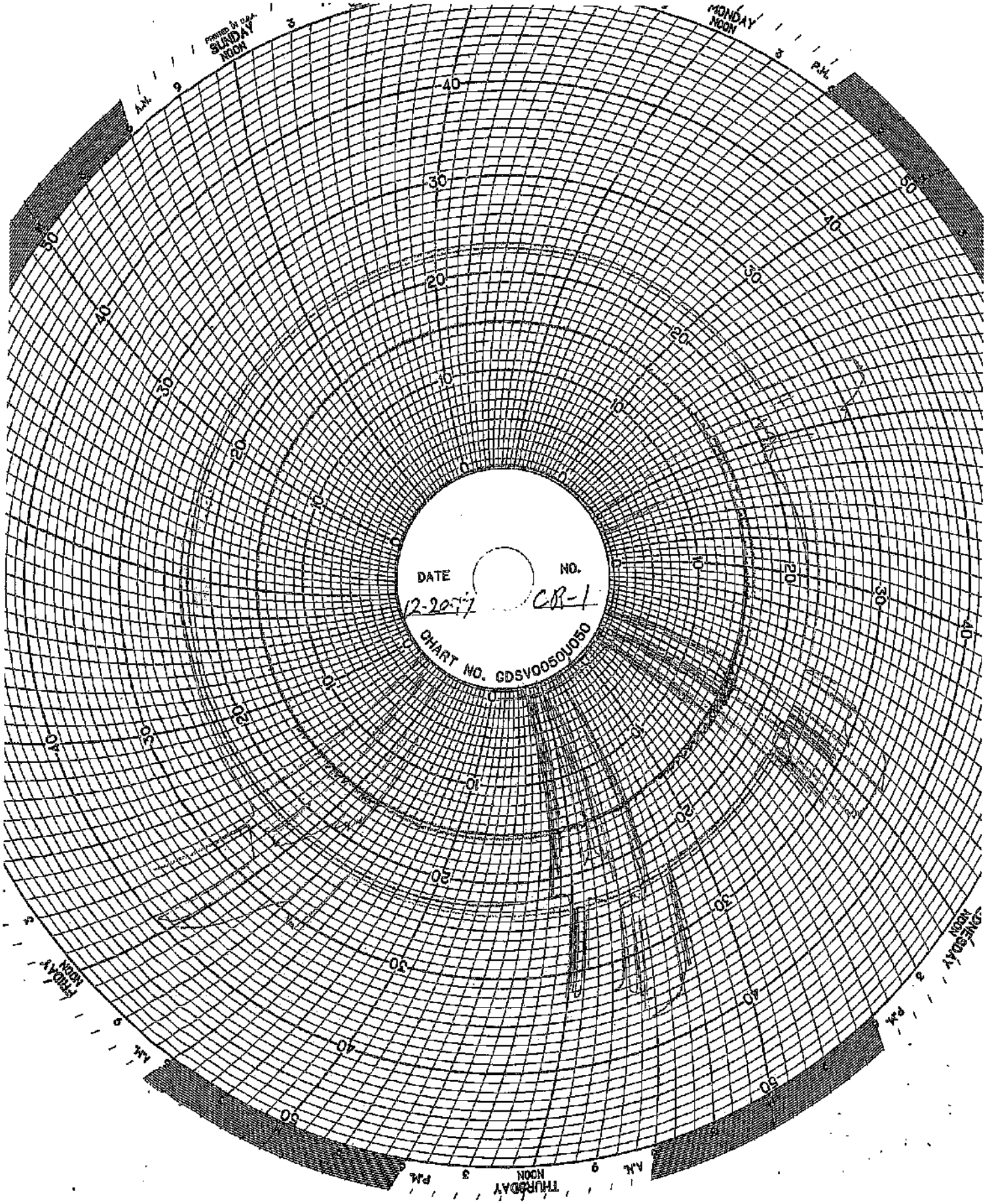


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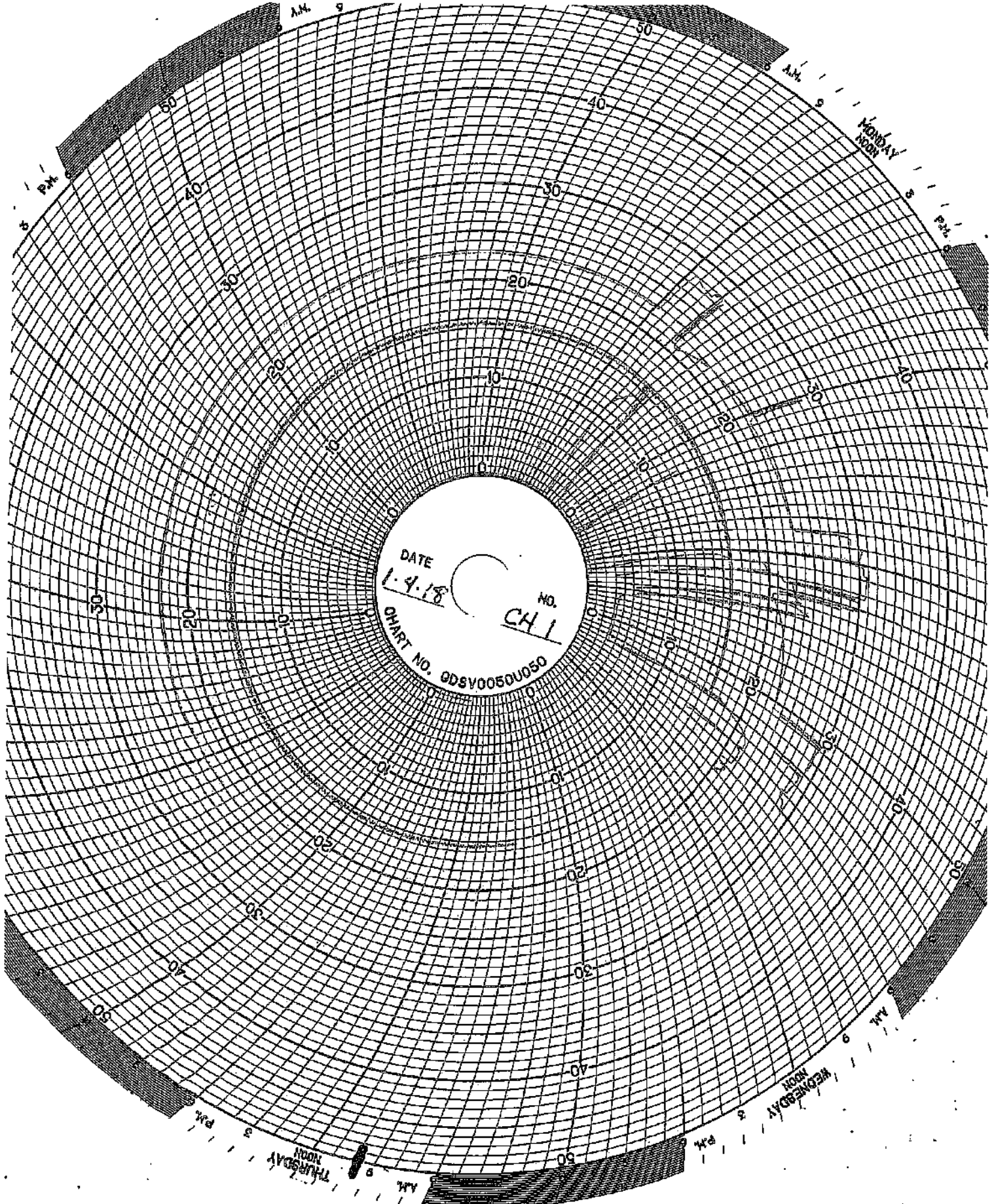
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**WELL 2 DATA**

Well 02 Monthly Data

Date	Min Injection Pressure (PSIG)	Max Injection Pressure (PSIG)	Min Sight Glass Level (in)	Max Sight Glass Level (in)	Min Annulus Pressure (PSIG)	Max Annulus Pressure (PSIG)	Min Injectate pH	Max Injectate pH	Min Flow Rate (GPM)	Max Flow Rate (GPM)	Min Differential Pressure (PSIG)	Max Differential Pressure (PSIG)
12/1/2017	0.0	0.0	16.7	17.6	208.0	209.2	6.9	6.9	0.0	0.0	208.0	209.2
12/2/2017	0.0	0.0	16.8	17.4	207.3	208.7	6.9	6.9	0.0	0.0	207.3	208.7
12/3/2017	0.0	0.0	16.7	17.5	206.8	208.2	2.3	6.9	0.0	0.0	206.8	208.2
12/4/2017	0.0	0.0	17.1	17.5	206.6	207.8	0.7	2.3	0.0	0.0	206.6	207.8
12/5/2017	0.0	0.0	16.8	17.5	206.0	207.8	2.3	7.3	0.0	0.0	206.0	207.8
12/6/2017	0.0	0.0	16.7	17.5	205.6	206.7	7.2	7.2	0.4	9.2	205.6	206.7
12/7/2017	0.0	0.0	17.0	17.5	205.3	206.5	7.2	7.2	4.6	110.5	205.3	206.5
12/8/2017	0.0	0.0	17.0	17.1	204.3	205.9	7.2	7.2	0.0	0.0	204.3	205.9
12/9/2017	0.0	0.0	17.0	17.1	203.6	205.0	7.2	7.2	0.0	0.0	203.6	205.0
12/10/2017	0.0	0.0	16.6	17.1	202.8	204.2	7.2	7.2	0.0	0.0	202.8	204.2
12/11/2017	0.0	0.0	17.0	17.2	202.4	203.5	7.2	7.2	0.0	0.0	202.4	203.5
12/12/2017	0.0	0.0	16.9	17.1	201.6	203.4	0.6	0.6	0.0	0.0	201.6	203.4
12/13/2017	0.0	0.0	16.9	17.1	201.2	202.4	0.6	1.4	0.0	0.0	201.2	202.4
12/14/2017	0.0	0.0	16.5	17.5	200.5	201.9	1.4	1.4	0.0	0.0	200.5	201.9
12/15/2017	0.0	0.0	16.6	17.6	200.2	201.2	1.4	1.4	0.0	0.0	200.2	201.2
12/16/2017	0.0	0.0	16.9	17.1	200.0	201.1	2.9	2.9	0.0	0.0	200.0	201.1
12/17/2017	0.0	0.0	16.9	17.1	199.8	200.8	1.2	3.0	0.0	0.0	199.8	201.0
12/18/2017	0.0	0.0	16.7	17.5	199.8	201.4	2.2	2.2	0.0	0.0	199.8	201.4
12/19/2017	0.0	0.0	16.7	17.5	200.6	201.6	2.2	2.2	0.0	0.0	200.6	201.6
12/20/2017	0.0	0.0	16.6	17.5	200.0	201.3	2.2	2.2	0.0	0.0	200.0	201.3
12/21/2017	0.0	0.0	17.0	17.1	200.0	201.1	2.2	2.2	0.0	0.0	200.0	201.4
12/22/2017	0.0	0.0	17.0	17.1	199.9	200.9	2.2	2.2	0.0	0.0	199.9	200.9
12/23/2017	0.0	0.0	17.0	17.2	199.0	200.6	2.2	6.7	0.0	0.0	199.0	200.6
12/24/2017	0.0	0.0	16.9	17.1	198.0	199.7	6.6	6.7	0.0	0.0	198.0	199.7
12/25/2017	0.0	0.0	16.9	17.1	196.7	198.6	1.3	6.6	0.0	0.0	196.7	198.6
12/26/2017	0.0	0.0	16.8	17.1	196.2	197.5	1.7	1.7	0.0	0.0	196.2	197.5
12/27/2017	0.0	0.0	16.8	17.1	195.8	197.0	1.3	1.4	0.0	0.0	195.8	197.0
12/28/2017	0.0	0.0	16.6	17.6	195.7	196.8	1.1	1.4	0.0	0.0	195.7	196.8
12/29/2017	0.0	0.0	16.7	17.1	195.5	196.7	1.4	1.4	0.0	0.0	195.5	196.7
12/30/2017	0.0	0.0	16.9	17.1	194.9	196.7	1.1	1.2	0.0	0.0	194.9	196.7
12/31/2017	0.0	0.0	16.8	17.0	194.2	195.6	1.3	1.3	0.0	0.0	194.2	195.6

## 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)

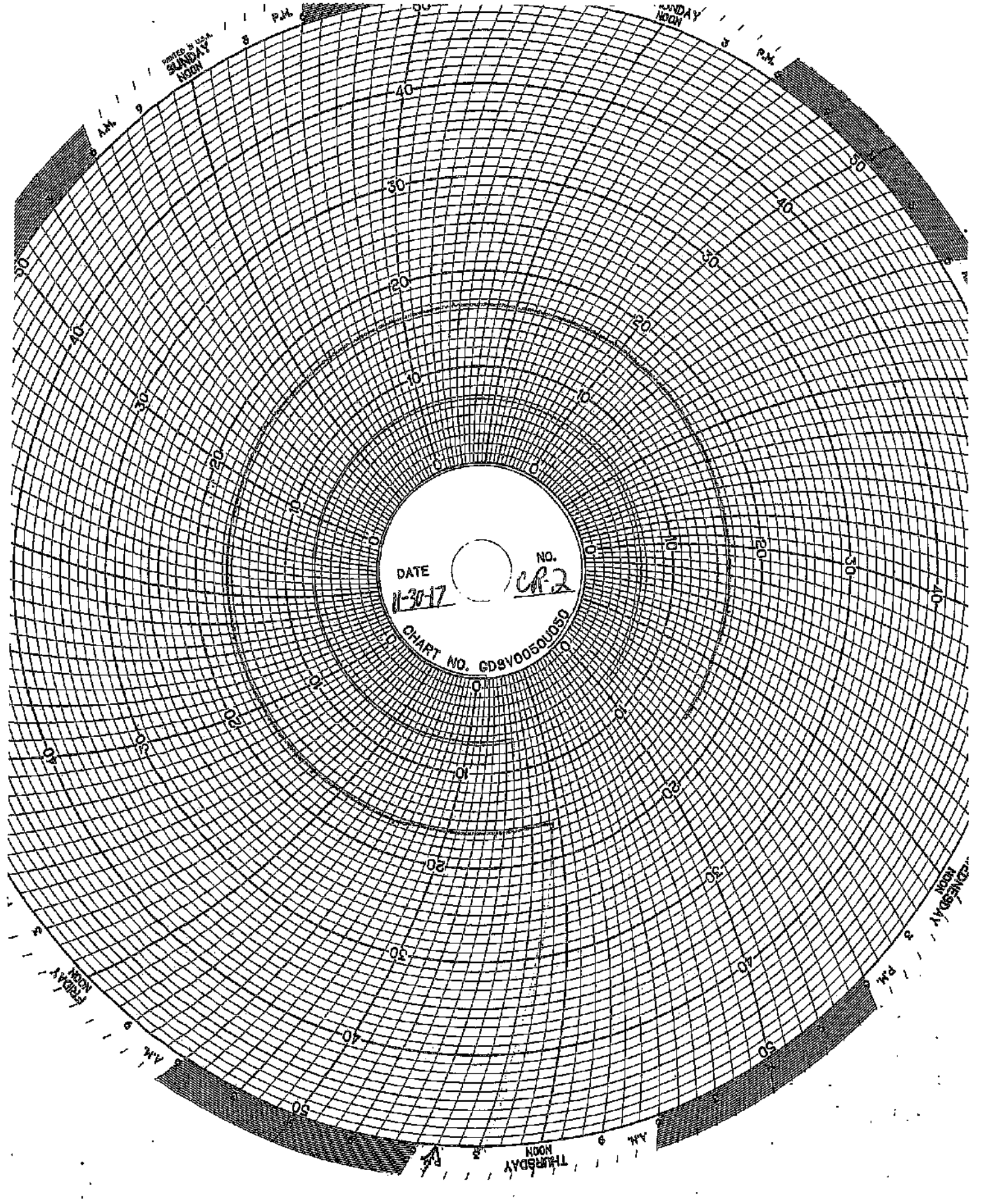
Channel #4

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

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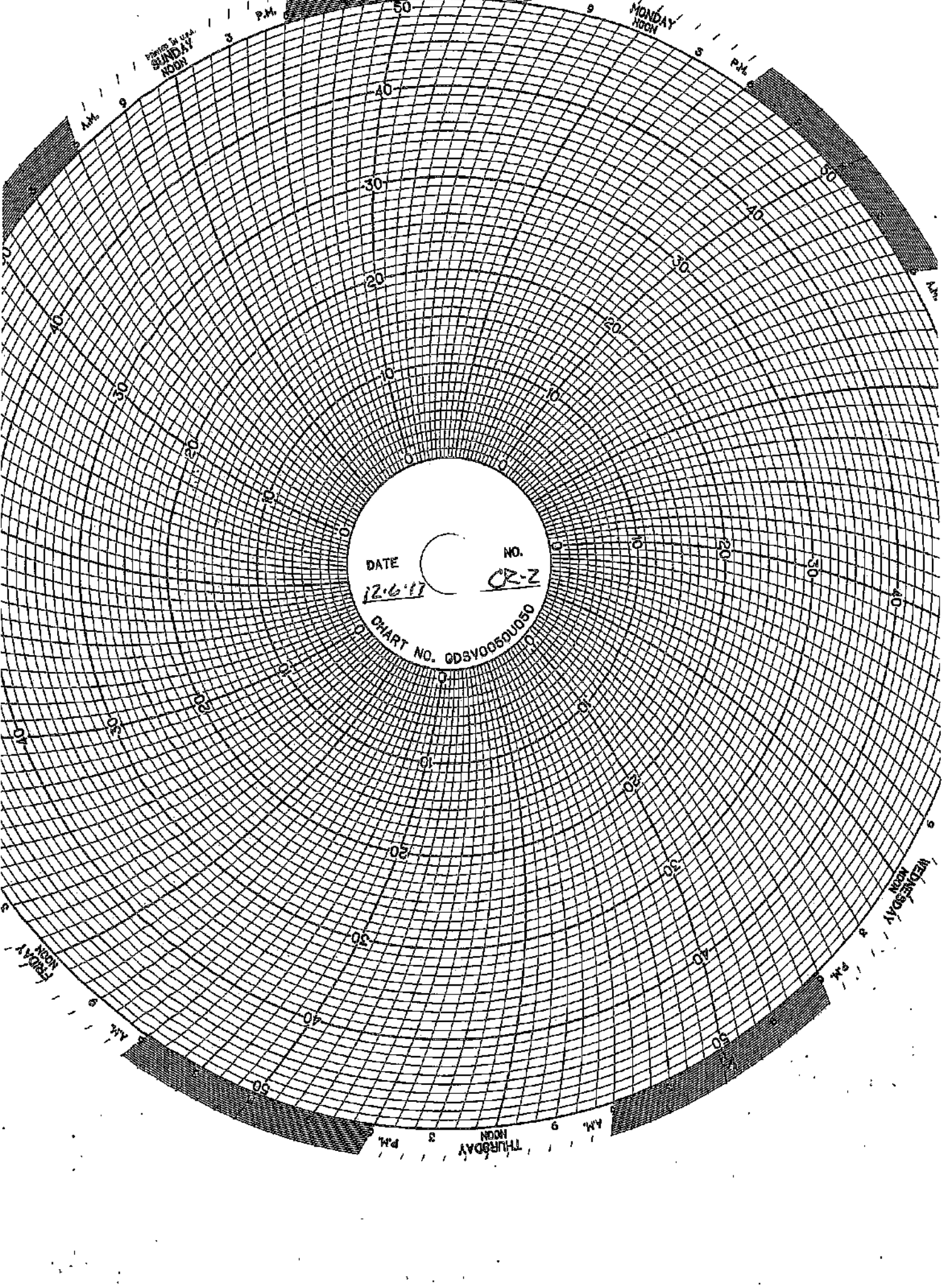
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DATE 12.6.11

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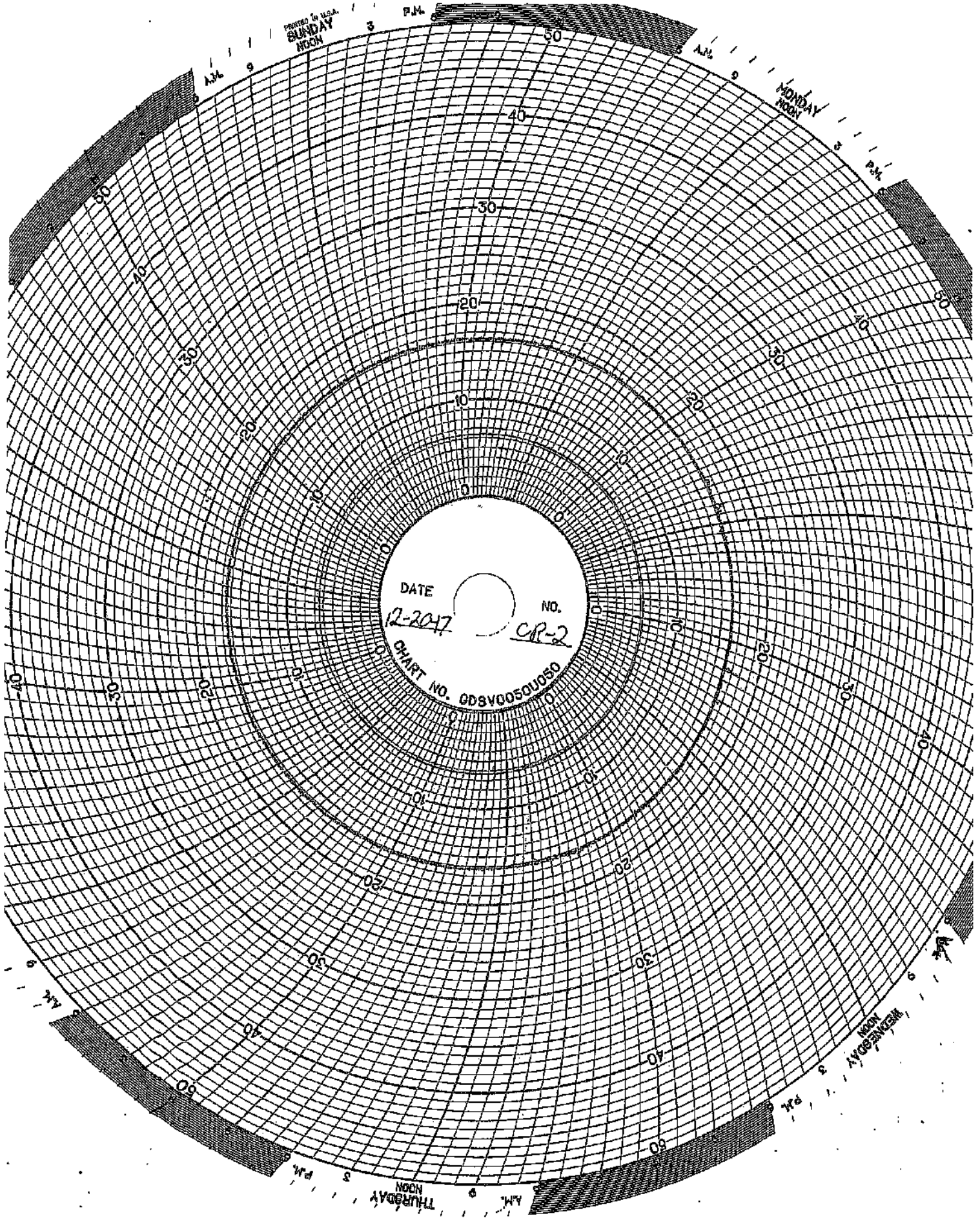
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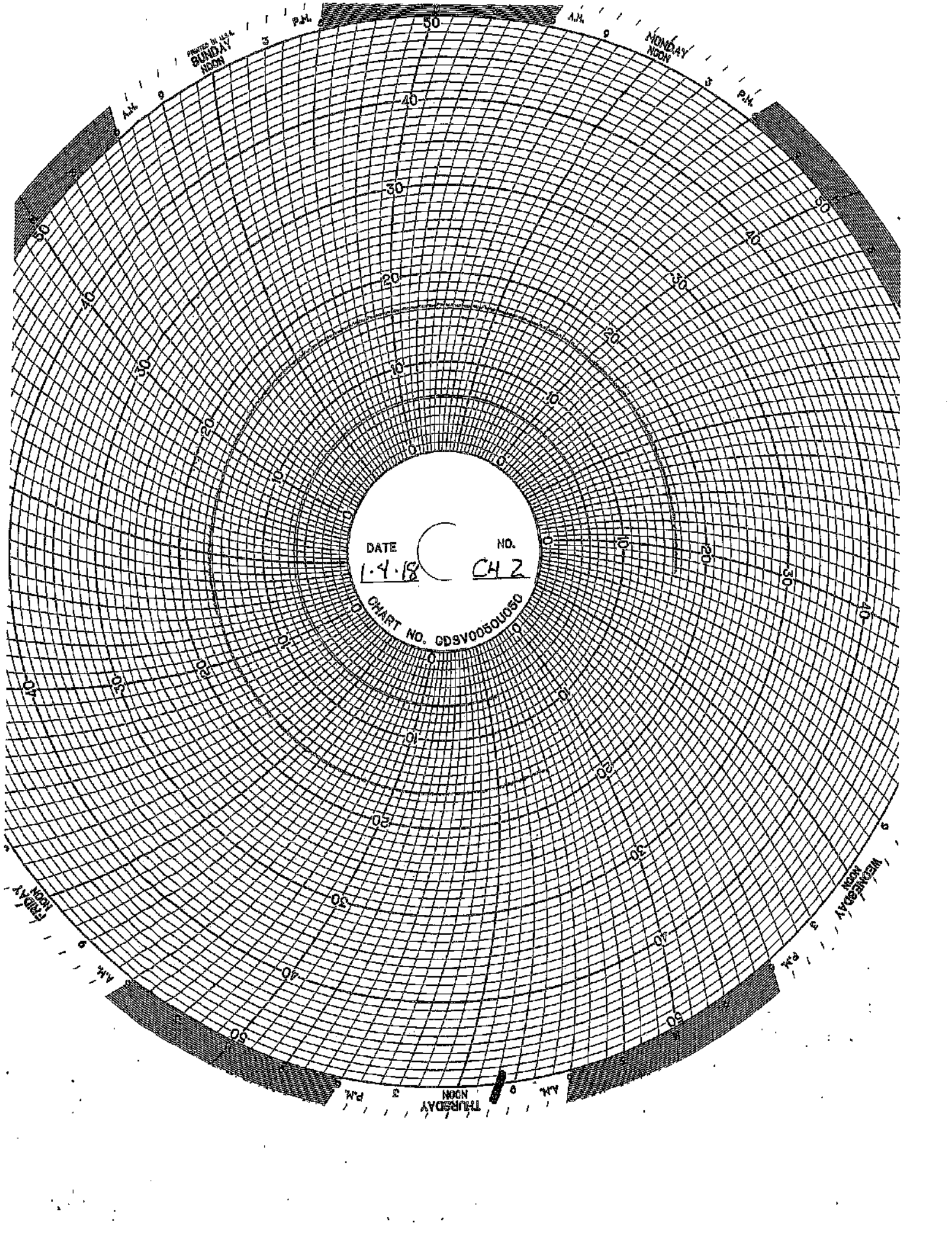
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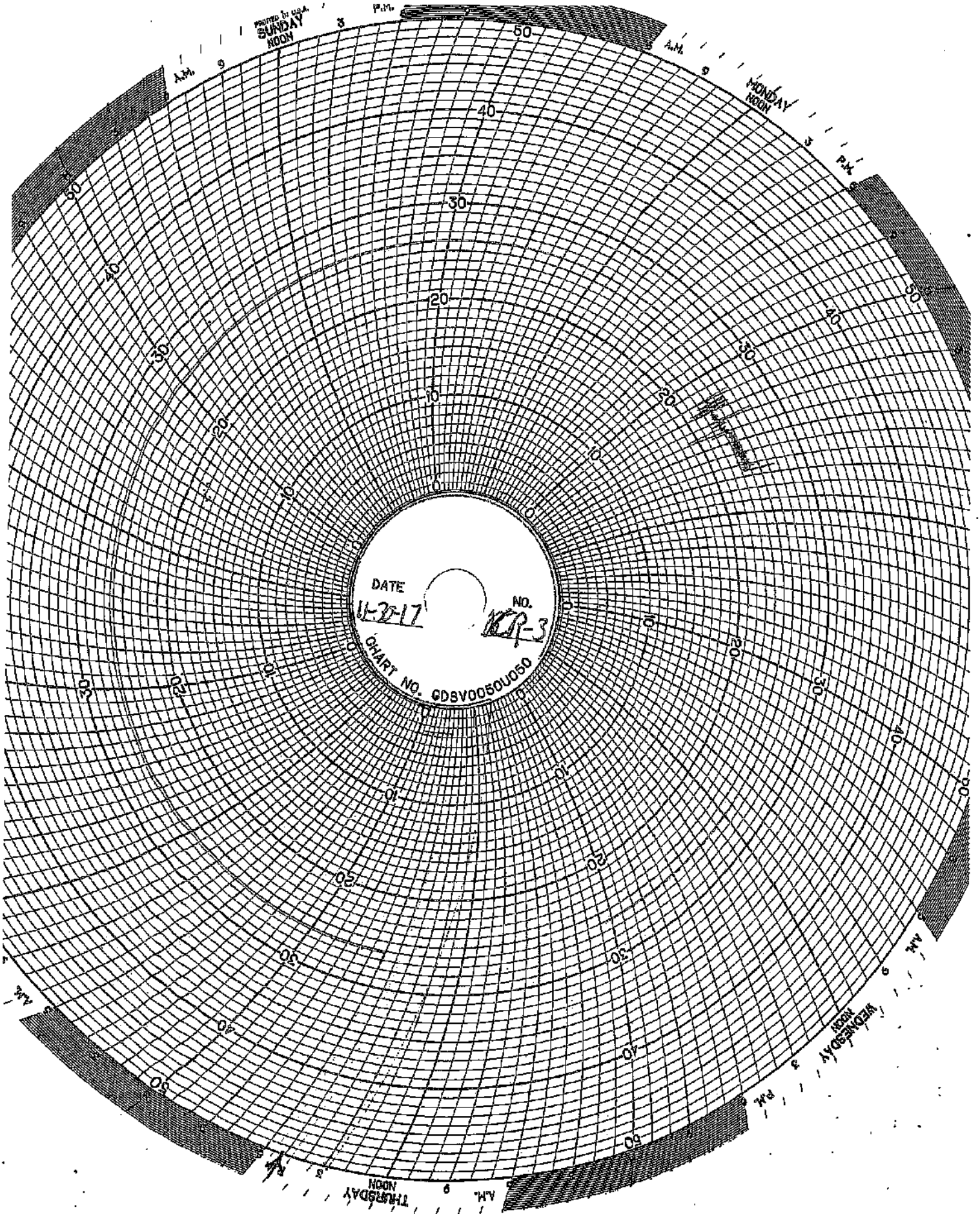
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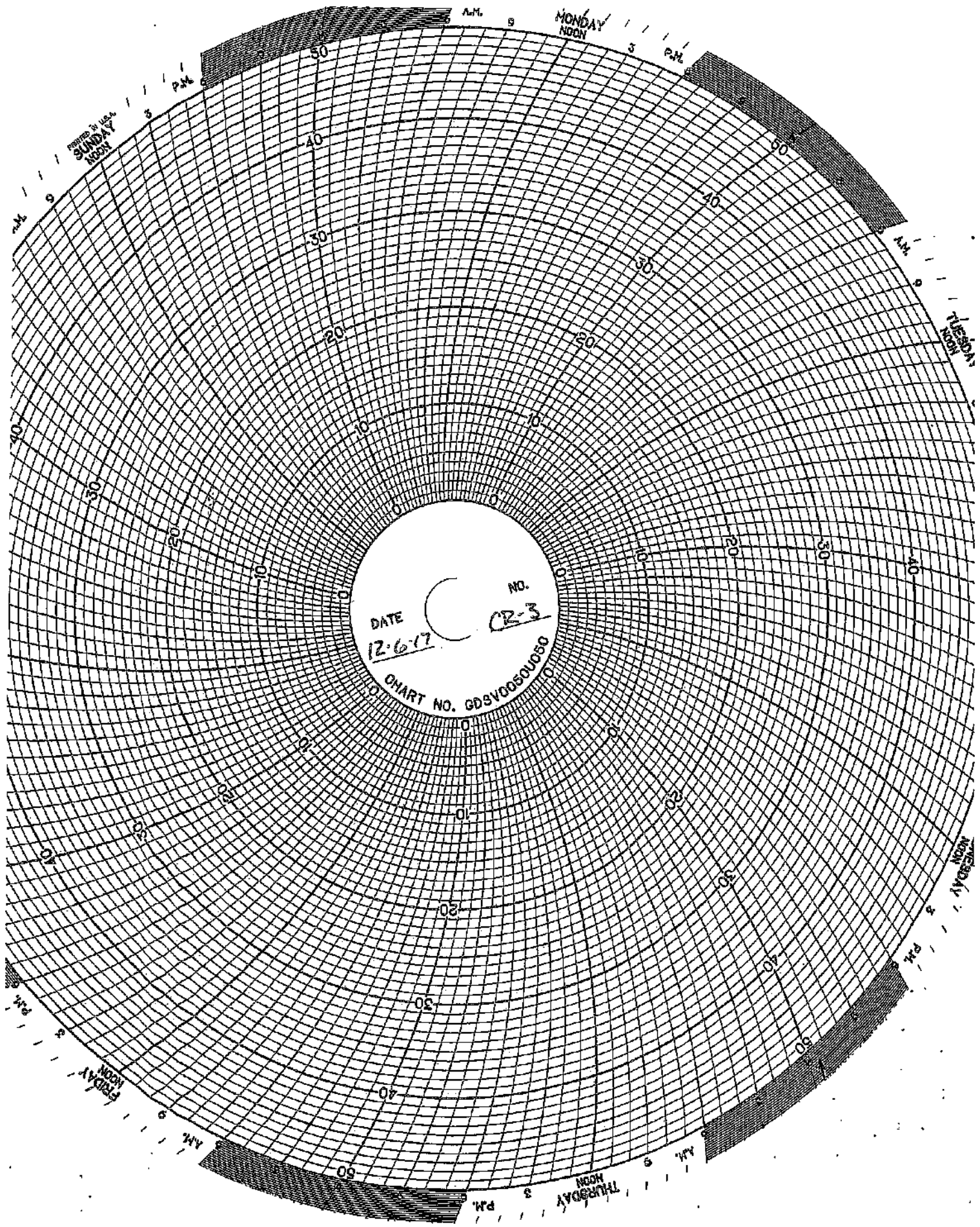
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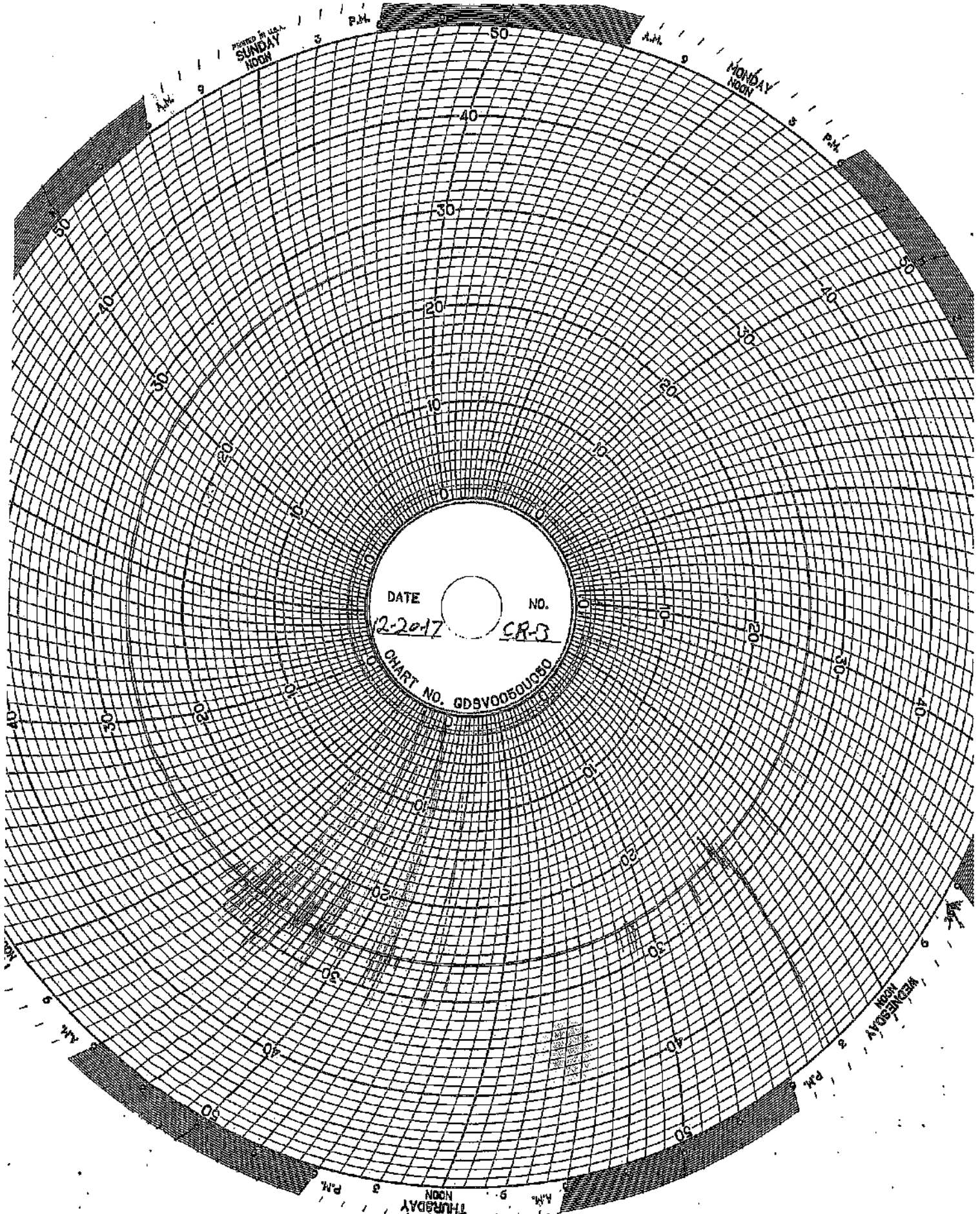
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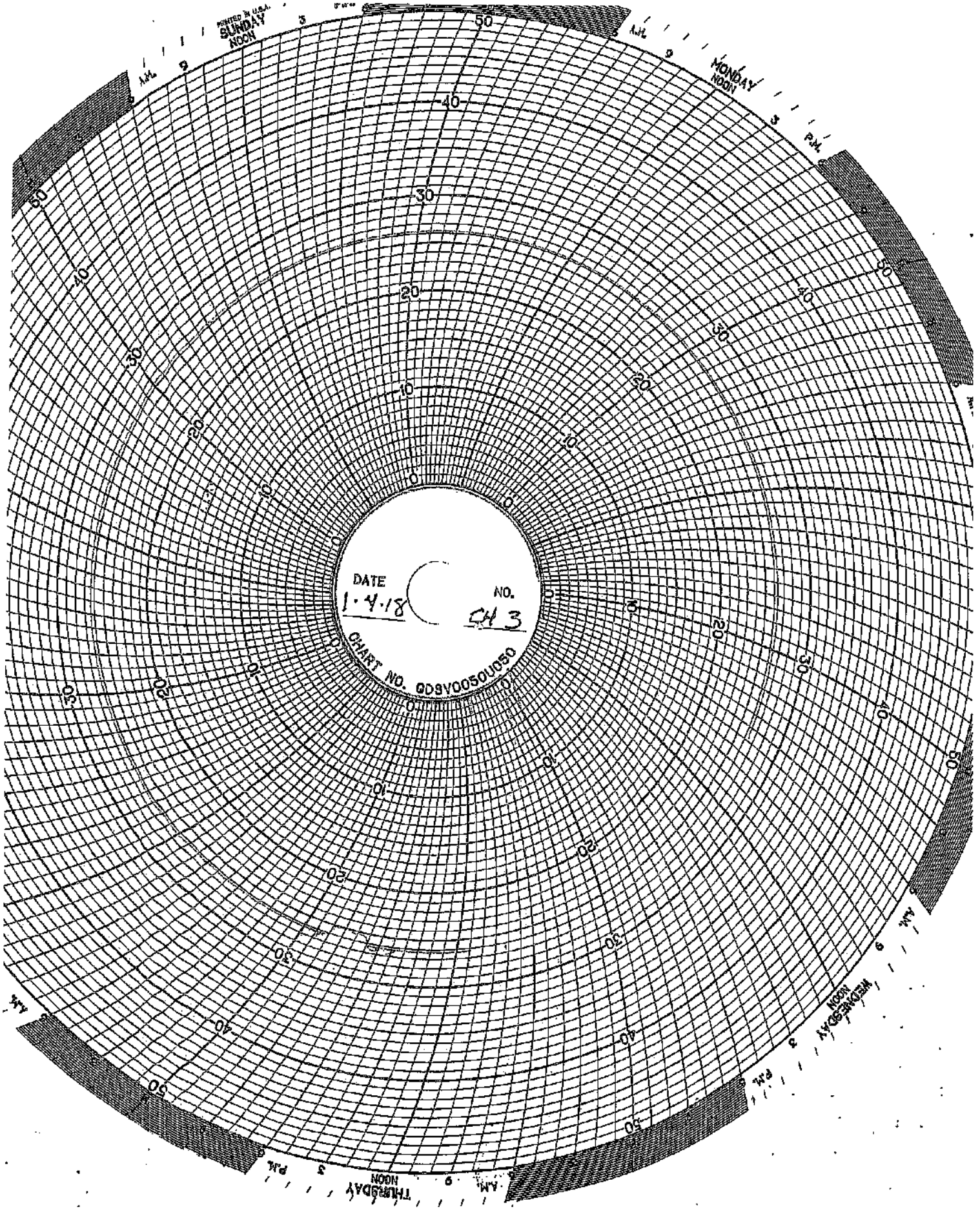
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## **MAINTENANCE LOG**

**UIC Monthly Maintenance Log**

No Maintenance in December

## **CORROSION MONITORING**



## **CORROSION MONITORING COUPONS VISUAL DESCRIPTION**

**December 12, 2017**

### **Fiberglass Coupon**

**The coupon is dark orange (rust) in color with similar semi-smooth textures on both sides. Its cut edges appear sanded. The coupon is free of pits, cracks, swelling, wicking and blemishes.**

### **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 appears to be no effect on this coupon.**

### **Stainless Steel Coupon**

**The coupon had experienced substantial corrosion since last month. The coupon is seriously pitted and corroded. Continuous affect takes place with this coupon.**

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	
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	
5/31/2015	13.334 g	6.084 g	6.784 g	
6/30/2016	13.328 g	10.942 g	6.793 g	
8/3/2016	13.326 g	10.529 g	6.743 g	
8/29/2016	13.325 g	10.020 g	6.723 g	
10/27/2016	13.325 g	8.765 g	6.708 g	
11/29/2016	13.327 g	8.571 g	6.740 g	
12/12/2016	13.323 g	8.223 g	6.717 g	
1/3/2017	13.325 g	8.059 g	6.712 g	
2/28/2017	13.324 g	7.634 g	6.727 g	
3/24/2017	13.325 g	7.370 g	6.732 g	
4/28/2017	13.325 g	6.736 g	6.736 g	
5/11/2017	13.323 g	7.352 g	6.689 g	
6/12/2017	13.323 g	7.357 g	6.689 g	
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 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.

# GHESQUIERE PLASTIC TESTING, INC.

20450 HARPER AVENUE  
HARPER WOODS, MI 48226  
PHONE (313) 885-8585  
FAX (313) 885-1771

Report Date: November 15, 2013  
Test Date: October 13 - 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:

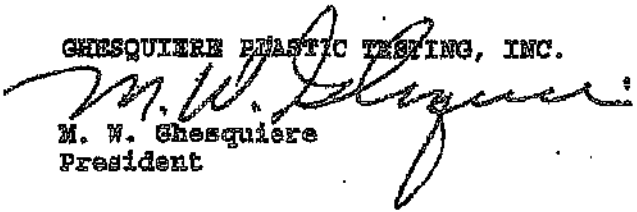
The following determination was made based upon the above test:

### 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

BWG/kni

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TOTAL 1 PAGES

# Ghesquiere Plastic Testing, Inc.

20450 HARPER AVENUE  
HARPER WOODS, MI 48225  
PHONE (813) 885-3535  
FAX (818) 885-1771

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

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

Attention: Mr. Don Anderson

### WORK REQUESTED:

Perform Barcol Hardness test on sample submitted.

### DESCRIPTION OF SAMPLE:

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

### WORK PERFORMED:

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

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

### RESULTS:

The following determination was made based upon the above test:

### BARCOL HARDNESS

#### Hardness

Specimen 1: 90

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

Ghesquiere Plastic Testing, Inc.

M. W. Ghesquiere  
President

MWG/dm

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TOTAL 1 PAGES

# GHSQUIERE 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:

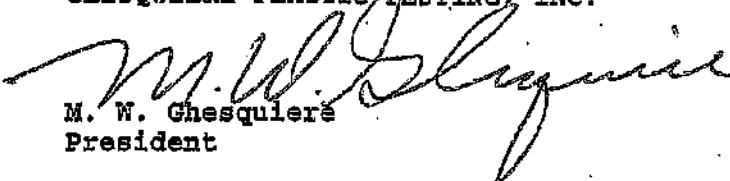
The following determination was made based upon the above test:

### BARCOL HARDNESS

	<u>Hardness</u>
Specimen 1	85

Specimen was returned to the client June 16, 2014.

GHSQUIERE 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  
Remulus, MI 48174

Prepared By:

*Melissa Martin*  
Sr. Project Technician

Approved By:

*Jim Drummond*  
Physical & Plastics Testing, Manager



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



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ARROWHUBBER DEVELOPMENT LABORATORY, INC.

2837 Gilchrist Rd. | Akron, Ohio 44305 | answers@ardl.com  
Toll Free (800) 636-ARDL | Worldwide (330) 794-6680 | Fax (330) 794-6610



**Testing, Development, Problem Solving**

October 2, 2014

John Frost  
Environmental Geo-Technologies, LLC

Page 2 of 2  
PN118325

**SUBJECT:** Barcol Hardness on one material,  
PO# Attn: John Frost

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

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

**Results**

Barcol Hardness, Instant

97

Prepared By:

  
Melissa Martin  
Sr. Project Technician

Approved By:

  
Scott W. Yates  
Plastics Testing Assistant Manager

www.ardl.com

2687 Glenhurst Rd. | Akron, Ohio 44305 | answers@ardl.com  
Toll Free: (800) 830-ARDL | Worldwide: (330) 794-8600 | Fax: (330) 794-6610





AKRON RUBBER DEVELOPMENT LABORATORY, INC.

Progress Through Innovation, Technology and Customer Satisfaction

October 22, 2015

# TEST REPORT

PN 125322  
PO 00154

## PLASTICS TESTING DEPARTMENT

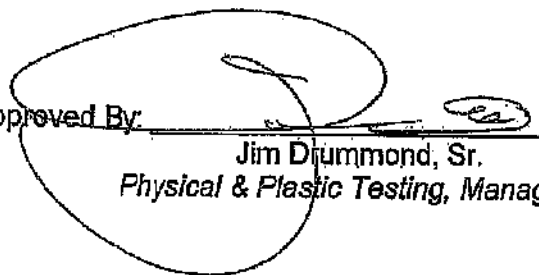
Prepared For:

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  
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www.ardl.com | 2887 Gilchrist Rd. | Akron, Ohio 44305 | answers@ardl.com | Toll Free (800) 830-ARDL  
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 2683-13a**  
Instant Reading

Results

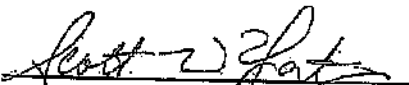
Barcol Hardness, Instant

96

Prepared By:

  
Melissa Martin  
Sr. Project Technician

Approved By:

  
Scott W. Yates  
Plastics Testing Assistant Manager



Progress Through Innovation, Technology and Customer Satisfaction

December 12, 2016


**TEST REPORT**

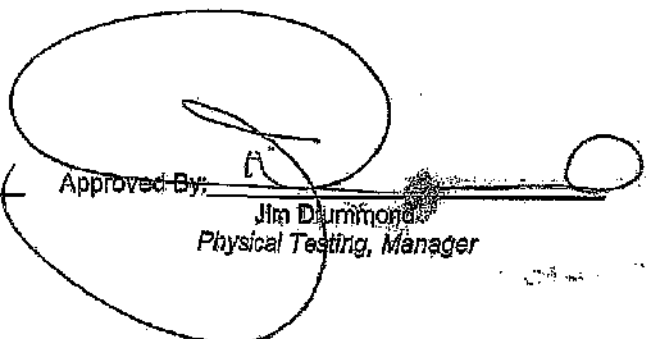
**PN 132662**  
PO

**PLASTICS TESTING DEPARTMENT**

Prepared For:

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

Prepared By:   
Melissa Martin  
Senior Project Technician

Approved By:   
Jim Dammone  
Physical Testing, Manager

Rev 04/19/16



ANZLA ISO 17025 Accredited Testing Laboratory — Certificate Numbers 256.01 & 256.02  
ISO 9001:2008 Registered



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December 12, 2016

John Frost  
Environmental Geo-Technologies, LLC

Page 2 of 2  
PN 132662

**SUBJECT:** Barcol Hardness on one (1) material.

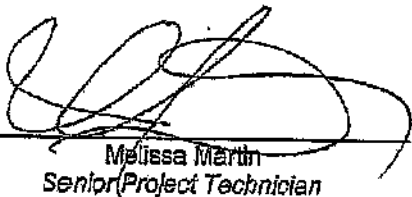
**RECEIVED:** One (1) small section identified as; Fiberglass Coupon.

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

RESULTS

Barcol Hardness, Instant 98

Prepared By:



Melissa Martin  
Senior Project Technician

Approved By:



Scott Yates  
Plastics Testing, Assistant Manager

wk

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



Progress Through Innovation, Technology and Customer Satisfaction

December 13, 2017


**TEST REPORT**

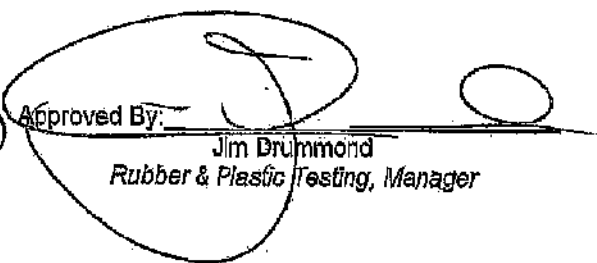
**PN 139140**  
PO#

**PLASTIC TESTING DEPARTMENT**

Prepared For:

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

Prepared By:   
Melissa Martin  
Sr Project Technician

Approved By:   
Jim Drummond  
Rubber & Plastic Testing, Manager

Rev 041916



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**ISO 9001:2008**  
Registered

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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**

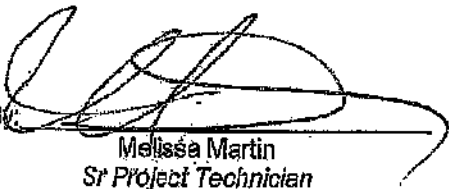
Instant Reading

**Results**

Barcol Hardness, Instant

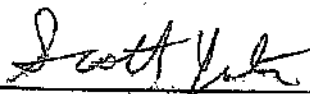
96

Prepared By:



Melissa Martin  
Sr Project Technician

Approved By:



Scott Yates  
Plastics Testing, Assistant Manager

SC

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
**INJECTION  
FINGERPRINTS**

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/29/17
Receiving ID#	F12291701
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	PS
Sampled by	JFO

LAB INFORMATION		Sulfate Bars: 2/1	
Compatible? (RT# )	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	7140°F	Magnesium	
pH (S.U.)	0.6	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.12	TDS	890
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	66°F		
Conductivity	179µS		
% Solids	8%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	21%		
Radiation Screen (as needed)			
Lab Signature			



FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/29/17
Receiving ID#	±12291702
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	PS
Sampled by	JFO

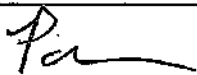
LAB INFORMATION		Oil Field Sites Only	
Compatible? (RT# )	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	7140°F	Magnesium	
pH (S.U.)	2.0	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.10	TDS	1270
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	65°F		
Conductivity	39mS		
% Solids	12%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	41%		
Radiation Screen (as needed)			
Lab Signature	Pain		

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/27/17
Receiving ID#	12271701
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	PS
Sampled by	Jfo

LAB INFORMATION		Analytical Parameters	
All Waste Solutions		Inorganic Bases Only	
Compatible? (RT# )	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>1400F	Magnesium	
pH (S.U.)	1.0	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.08	TDS	11070
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	64°F		
Conductivity	87µS		
% Solids	11%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	21%		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	9:00AM	12/26/17
Receiving ID#	F12261701	
Manifest#	Line:	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	PS	
Sampled by	[Signature]	

Compatible? (RT# )	Yes	No	Barium	
PCBs (ppm)(Oily Waste Only)?			Calcium	
TOC (ppm)(CC Waste Only)?			Total Iron	
Flash Point (°F)	> 140°F		Magnesium	
pH (S.U.)	0.9		Sodium Chloride	
Cyanides? (mg/L)			Bicarbonate	
Sulfides? (ppm)			Carbonate	
Specific Gravity	1.18		TDS	16%
Physical Description			Resistivity	
Stream Consistency	Yes	No	Sulfate	
Oil In Sample	Yes	No		
Temperature	63°F			
Conductivity	124 μS			
% Solids	16%			
Turbidity	Yes	No		
Color (visual)				
TSS (%)	4.9%			
Radiation Screen (as needed)				
Lab Signature	[Signature]			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	9:00am	12/20/17
Receiving ID#	E1220701	
Manifest#	Line:	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time In		
Time out		
Received by	<i>[Signature]</i>	
Sampled by	PS <i>[Signature]</i>	

Compatible? (RT# )	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	740°F	Magnesium	
pH (S.U.)	1.2	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.08	TDS	1290
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	66°F		
Conductivity	12mS		
% Solids	12.9%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	6.9%		
Radiation Screen (as needed)			
Lab Signature	<i>[Signature]</i>		

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

RECEIVING & APPROVAL FORM

Date	10:00Am	12 / 19 / 17
Receiving ID#	F12191701	
Manifest#	Line:	
Land Ban Cert Included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	PS	
Sampled by	[Signature]	

Compatible? (RT# )	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Barium	
PCBs (ppm)(Oily Waste Only)?			Calcium	
TOC (ppm)(CC Waste Only)?			Total Iron	
Flash Point (°F)	> 140°F		Magnesium	
pH (S.U.)	0.9		Sodium Chloride	
Cyanides? (mg/L)			Bicarbonate	
Sulfides? (ppm)			Carbonate	
Specific Gravity	1.10		TDS	14%
Physical Description			Resistivity	
Stream Consistency	Yes	No	Sulfate	
Oil in Sample	Yes	No		
Temperature	66°F			
Conductivity	12 mS			
% Solids	14%			
Turbidity	Yes	No		
Color (visual)				
TSS (%)	21%			
Radiation Screen (as needed)				
Lab Signature	PS			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	12-17-17	12-17-17
Receiving ID#	12191702	
Manifest#	Line:	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time In		
Time out		
Received by	RS	
Sampled by	B	


Compatible? (RT# )	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Barium	
PCBs (ppm)(Oily Waste Only)?			Calcium	
TOC (ppm)(CG Waste Only)?			Total Iron	
Flash Point (°F)	>140°F		Magnesium	
pH (S.U.)	0.9		Sodium Chloride	
Cyanides? (mg/L)			Bicarbonate	
Sulfides? (ppm)			Carbonate	
Specific Gravity	1.12		TDS	2390
Physical Description			Resistivity	
Stream Consistency	<input type="radio"/> Yes	<input type="radio"/> No	Sulfate	
Oil in Sample	<input type="radio"/> Yes	<input type="radio"/> No		
Temperature	66°F			
Conductivity	55 uS			
% Solids	23%			
Turbidity	<input type="radio"/> Yes	<input type="radio"/> No		
Color (visual)				
TSS (%)	21%			
Radiation Screen (as needed)				
Lab Signature	P			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	11:00 am	12/18/17
Receiving ID#	I121817 01	
Manifest#	Line:	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time In		
Time out		
Received by	PS	
Sampled by	AW	

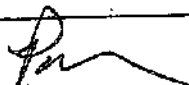
Compatible? (RT# )	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	7400F	Magnesium	
pH (S.U.)	6.6	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.06	TDS	1190
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	64°F		
Conductivity	5 mS		
% Solids	11%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 1%		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

RECEIVING & APPROVAL FORM

Date	9:00AM 12/12/17
Receiving ID#	12121701
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	PS
Sampled by	Jan 7

Compatible? (RT# )	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	7140°F	Magnesium	
pH (S.U.)	1.3	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.06	TDS	6%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	66°F		
Conductivity	24mS		
% Solids	6%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	1%		
Radiation Screen (as needed)			
Lab Signature			

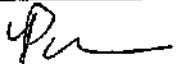


FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	11:30	12/18/17
Receiving ID#	I12111702	
Manifest#	Line:	
Land Ban Cert Included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time In		
Time out		
Received by	PS	
Sampled by	AW	

Compatible? (RT# )	Yes	No	Barium	
PCBs (ppm)(Oily Waste Only)?			Calcium	
TOC (ppm)(CC Waste Only)?			Total Iron	
Flash Point (°F)	>1400 F		Magnesium	
pH (S.U.)	1.1		Sodium Chloride	
Cyanides? (mg/L)			Bicarbonate	
Sulfides? (ppm)			Carbonate	
Specific Gravity	1.10		TDS	12%
Physical Description			Resistivity	
Stream Consistency	Yes	No	Sulfate	
Oil in Sample	Yes	No		
Temperature	64°F			
Conductivity	42 mS			
% Solids	12-90			
Turbidity	Yes	No		
Color (visual)				
TSS (%)	21%			
Radiation Screen (as needed)				
Lab Signature				

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8:45 AM	12 / 11 / 17
Receiving ID#	F12111701	
Manifest#	Line:	
Land Ban Cert Included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time In		
Time out		
Received by	BS	
Sampled by	[Signature]	

Compatible? (RT# )	Yes	No	Barium	
PCBs (ppm)(Oily Waste Only)?			Calcium	
TOC (ppm)(CC Waste Only)?			Total Iron	
Flash Point (°F)	> 140°F		Magnesium	
pH (S.U.)	0.7		Sodium Chloride	
Cyanides? (mg/L)			Bicarbonate	
Sulfides? (ppm)			Carbonate	
Specific Gravity	1.06		TDS	790
Physical Description			Resistivity	
Stream Consistency	Yes	No	Sulfate	
Oil in Sample	Yes	No		
Temperature	63°F			
Conductivity	0.7 mS			
% Solids	790			
Turbidity	Yes	No		
Color (visual)				
TSS (%)	6190			
Radiation Screen (as needed)				
Lab Signature	[Signature]			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	3:52 PM	12/7/17
Receiving ID#	91271702	
Manifest#	Line:	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time In		
Time out		
Received by	A	
Sampled by	B	

Compatible? (RT# )	Yes	No	Barium	
PCBs (ppm)(Oily Waste Only)?			Calcium	
TOC (ppm)(CG Waste Only)?			Total Iron	
Flash Point (°F)	> 140 °F		Magnesium	
pH (S.U.)	0.1		Sodium Chloride	
Cyanides? (mg/L)			Bicarbonate	
Sulfides? (ppm)			Carbonate	
Specific Gravity	1.14		TDS	1690
Physical Description			Resistivity	
Stream Consistency	Yes	No	Sulfate	
Oil in Sample	Yes	No		
Temperature	65 °F			
Conductivity	175 mS			
% Solids	1690			
Turbidity	Yes	No		
Color (visual)				
TSS (%)	2190			
Radiation Screen (as needed)				
Lab Signature	A			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	12-17-17	8:15 AM
Receiving ID#	1171701	
Manifest#	Line:	
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time In		
Time out		
Received by	DB	
Sampled by	DB	

Compatible? (RT# )	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140°F	Magnesium	
pH (S.U.)	0.5	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.10	TDS	590
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	65°F		
Conductivity	107 uS		
% Solids	5%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	1%		
Radiation Screen (as needed)			
Lab Signature	P		

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8:30AM 12/06/17
Receiving ID#	F12061701
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	AS
Sampled by	AS

Compatible? (RT# )	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140°F	Magnesium	
pH (S.U.)	0.8	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.10	TDS	490
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	65°F		
Conductivity	1.2 uS		
% Solids	4%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 1%		
Radiation Screen (as needed)			
Lab Signature	PA		

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	9:20 AM	12/1/17
Receiving ID#	E1211701	
Manifest#	Line:	
Land Ban Cert Included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	BS	
Sampled by	DB	

Compatible? (RT# )	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140°F	Magnesium	
pH (S.U.)	0.1	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.16	TDS	890
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	65°F		
Conductivity	1.1 mS		
% Solids	890		
Turbidity	Yes No		
Color (visual)			
TSS (%)	4190		
Radiation Screen (as needed)			
Lab Signature	PM		



**WASTE STREAMS  
CHARACTERIZATIONS**



01261

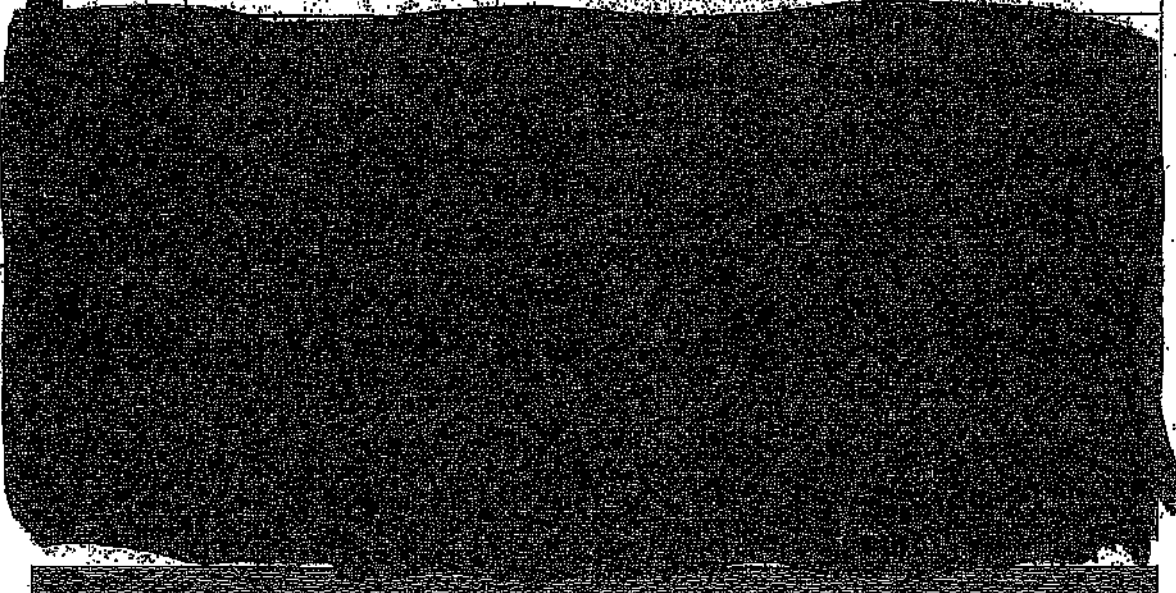


acceptable  
12/08/17

### Generator's Waste Profile and Service Agreement

In order to properly transport and manage your waste stream, please complete the following:

Generator Information	Customer Information	Billing Information
-----------------------	----------------------	---------------------



Common Name of Waste: waste water

Process Generating Waste: boiler wash

Waste Volume Produced Annually: 200,000 gal

Shipping Increments:  One Time  Weekly  Monthly  Quarterly  Yearly  Other

Check Any Hazardous Characteristics That Apply:  Reactive  Corrosive  Toxic  Flammable  Listed

Does your waste stream contain 10% or more oil?  Yes  No

Is this oil considered to be a "used oil" as determined by 40CFR 260.10?  Yes  No

*(If yes, then please complete used oil certification sheet.)*

Attach analytical and check the appropriate box below for any parameters for which your oils have been tested.

PCBs  TCLP (Volatiles/SemiVolatiles)  Total Halogens  Total Metals

Is this waste a nonhazardous liquid industrial waste?  YES  NO

What is the Color?  White  Grey  Black  Clear  (enter color)

Describe the Odor.  Strong  Mild  None

Does it Pass Paint Filter Test  YES  NO

Physical State at 70° F  Liquid  Slurry  Other

Density (weight/volume)

Specific Gravity 98-1.1

pH: 7-12

Flash Point (closed cup) > 212°F

Viscosity at 70° F  High  Medium  Low

Percent Composition 99 % Water      % Oil      % Rag 5 % Solids

Solids Composition:  Suspended  Settling  Both

Chemical Composition: List all major constituents, include herbicides, pesticides, carcinogens, pathogens and other hazardous constituents.

- O - VOCs

Chemical	Minimum	Maximum
Water	99 %	100 %
lime	< 1 %	%
Soda Ash	< 1 %	%
	%	%

Please check the "YES" column for constituents that have been TCLP tested and attach analytical results to this profile or check the "NO" column verifying the constituent is not present above hazardous levels. All constituents must have either a "YES" or "NO" checked.

Check the method used:  Total  TCLP  EP  Toxicity

METALS mg/L (ppm)			
Metal	Level > than	Yes	No
D01D Copper	100.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D03D Zinc	500.0	<input type="checkbox"/>	<input type="checkbox"/>
D004 Arsenic	5.0	<input type="checkbox"/>	<input type="checkbox"/>
D005 Barium	100.0	<input type="checkbox"/>	<input type="checkbox"/>
D006 Cadmium	1.0	<input type="checkbox"/>	<input type="checkbox"/>
D007 Chromium	5.0	<input type="checkbox"/>	<input type="checkbox"/>
D008 Lead	5.0	<input type="checkbox"/>	<input type="checkbox"/>
D009 Mercury	0.2	<input type="checkbox"/>	<input type="checkbox"/>
D010 Selenium	1.0	<input type="checkbox"/>	<input type="checkbox"/>
D011 Silver	5.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ORGANICS			
Material	Level > than	Yes	No
D018 Benzene	0.5	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D019 Carbon Tetrachloride	0.5	<input type="checkbox"/>	<input type="checkbox"/>
D021 Chlorobenzene	100.0	<input type="checkbox"/>	<input type="checkbox"/>
D022 Chloroform	5.0	<input type="checkbox"/>	<input type="checkbox"/>
D028 1, 2-Dichloroethane	0.5	<input type="checkbox"/>	<input type="checkbox"/>
D029 1, 1-Dichloroethylene	0.7	<input type="checkbox"/>	<input type="checkbox"/>
D036 Methyl Ethyl Ketone	200.0	<input type="checkbox"/>	<input type="checkbox"/>
D039 Tetrachloroethylene	0.7	<input type="checkbox"/>	<input type="checkbox"/>
D040 Trichloroethylene	0.5	<input type="checkbox"/>	<input type="checkbox"/>
D043 Vinyl Chloride	0.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**ACID EXTRACTABLES**

Material	Level > than	Yes	No
D028 o-Cresol	200		X
D024 m-Cresol	200		
D025 p-Cresol	200		
D026 Cresol	200		
D037 Pentachlorophenol	100		
D041 2, 4, 6-Trichlorophenol	400		
D042 2, 4, 6-Trichlorophenol	2.0		

**EXTRACTABLES**

Material	Level > than	Yes	No
D027 1, 4-Dichlorobenzene	7.5		X
D030 2, 4-Dinitrotoluene	0.13		
D032 Hexachlorobenzene	0.13		
D033 Hexachlorobutadiene	0.5		
D034 Hexachloroethane	3.0		
D036 Nitrobenzene	2.0		

D038 Pyridine 5.0

**HERBICIDES and PESTICIDES**

Material	Level > than	Yes	No
D012 Endrin	0.02		X
D013 Lindane	0.4		
D014 Methoxychlor	10.0		
D015 Toxaphene	0.5		
D016 2, 4-D	10.0		
D017 2, 4, 5-TP (Silvex)	1.0		
D020 Chlordane	0.03		
D031 Heptachlor	0.008		



Is this waste a D.O.T. Hazardous Material?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
State Waste Codes:	<input type="checkbox"/> 017L - Crankcase Oil <input type="checkbox"/> 019L - Coolants and Water Soluble Oil <input type="checkbox"/> 021L - Other Oil <input checked="" type="checkbox"/> 029L - Other Wastes
Proper Shipping Name:	Liquid Industrial By Product
Method of Shipment:	<input checked="" type="checkbox"/> Bulk <input type="checkbox"/> Drum <input type="checkbox"/> Tote
Additional Handling / Comments:	
Waste Receipt Classification:	<input checked="" type="checkbox"/> Organic Waste <input type="checkbox"/> City Waste <input type="checkbox"/> Metal Derived Waste



1. **Waste Disposal.** Subject to the terms and conditions contained herein and those in the Proposal and Approval Notification Letter, Advanced Resource Recovery, (hereinafter "ARR" or "Company"), and the Service Provider and/or Generator, (hereinafter collectively "Customer"), agree to be legally bound hereby and that ARR agrees to accept at its facility (the "Facility") Industrial Waste (hereinafter referred to as "Industrial Waste" or "Waste") delivered by Customer, and which is acceptable to ARR as herein provided.

2. **The Agreement.** The entire agreement of the parties for the disposal of Industrial Waste (the "Agreement") shall consist of these terms and conditions, and any application, permit, approval or other documents provided by the Company that may be applicable to such Waste. Waste accepted at the Facility by Company will constitute Customer's acceptance of the Proposal and Approval Notification's terms and conditions as well as the terms and conditions herein. Each Waste Approval's terms and conditions will supersede the terms and conditions of any prior Agreement between the parties.

3. **Waste Accepted at Facility.** Customer warrants that the Waste described in the Waste Characterization Profile that is delivered to Company at its Facility hereunder will not contain any quantity of hazardous materials or substances, radioactive materials or substances or toxic wastes or substances as defined by applicable federal, state and/or local laws or regulations. Any waste which does not meet this requirement shall hereinafter be referred to as "Unacceptable Waste." The Customer shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean the Company's disposal facility located at 27140 Princeton Ave., Ingham, MI 48141.

4. **Industrial Waste.** Customer warrants that the Waste delivered to Company hereunder will not contain any waste that is not specifically described on the Waste Characterization Profile which is incorporated herein and which is subsequently approved by the Company and will meet the material description as set forth in the application and otherwise in all significant respects. The parties may incorporate additional Industrial Waste as part of this Agreement if prior to delivery of such Waste to Company, Customer has provided a Waste Characterization Profile Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Industrial Waste disposal. Title to all Waste handled or disposed of by Company shall at all times remain with Customer.

5. **Rights of Refusal/Rejection.** Company has the right to refuse or reject after acceptance any load of wastes delivered to the facility if the Company believes the Customer has breached (or is breaching) its warranties or agreements hereunder. If Customer delivers wastes in breach of any warranty or agreements herein, Company may in its sole discretion, either remove and dispose of that waste and charge Customer for the costs or require Customer to promptly remove the Waste.

6. **Charges and Payment.** Customer agrees to pay the Company's rates as written in the Proposal and Approval Notification Letter, which may be modified from time to time upon thirty (30) days written notice to the Customer. Payment shall be made by Customer within thirty (30) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Customer agrees to pay service charge of 1.5% per month, or the maximum interest rate permitted by law whichever is less.

7. **Term.** This Agreement shall continue in effect until terminated by Company or Customer, with or without cause, upon prior notice by either party and representations and warranties regarding the waste delivered and the indemnities set forth herein shall survive termination of this Agreement.

8. **Indemnity.** Customer agrees to indemnify, save harmless, and defend Company, its Corporate affiliates, employees, officers and directors from and against any and all liabilities, claims, penalties, forfeitures, suits and the costs and expenses incident thereto (including costs of defense, settlement, and reasonable attorney's fees), which it may hereafter incur, become responsible for, or pay out as a result of death or bodily injuries to any person, destruction or damage to any property, contamination of or adverse effects on the environment, or any violation of governmental laws, regulations, or orders caused, in whole or in part by the Customer's breach of any warranty, term or provision of this Agreement, or any act, omission, willful misconduct or negligence of the Customer, its employees, or subcontractors in the performance of this Agreement.

9. **Default.** The occurrence of any of the following events shall also constitute an event of default by the Customer and shall give the Company the right to immediately terminate this Agreement. (a) A petition for reorganization or bankruptcy filed by or against the Customer; (b) Failure by Customer to pay any amount due to Company; (c) Any breach by Customer of any of its obligations pursuant to the Agreement. The parties covenant and agree that the Company's removal and acceptance of the Customer's Waste constitutes work on and an improvement to the Customer's real property. Accordingly, Customer grants to Company the right to file any and all documents permitted by law or otherwise on Customer's real property to secure the monies owed to Company by Customer for services performed.

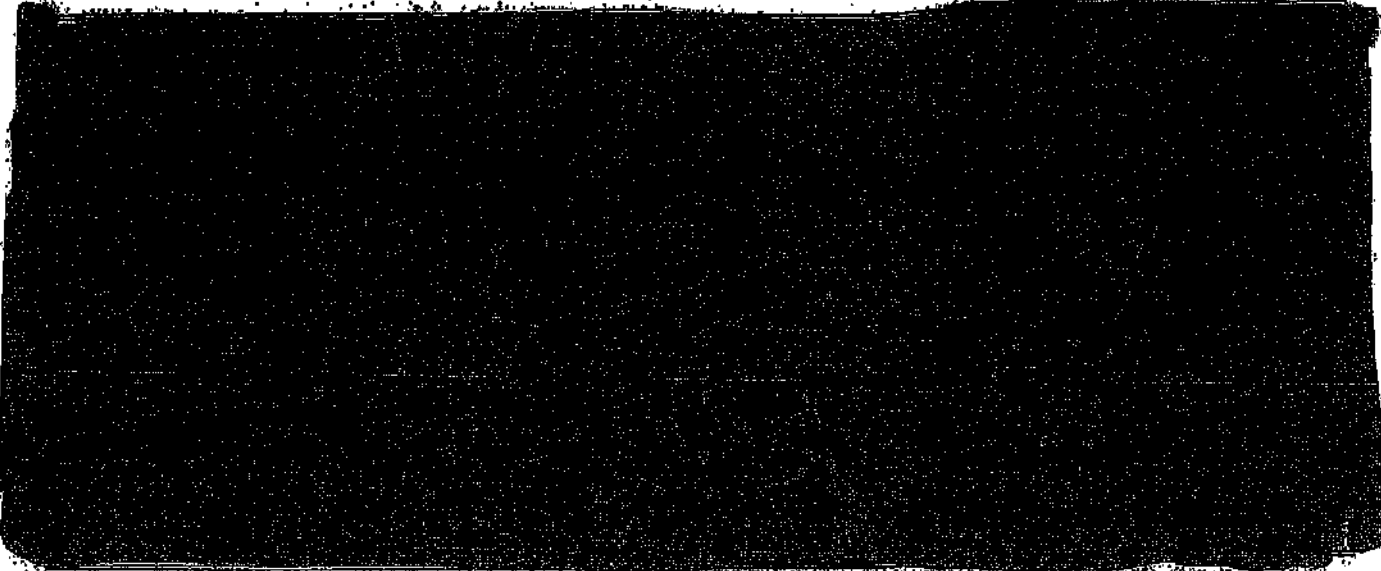
10. **Attorneys' Fees.** In the event of a breach by Customer of the Agreement, the Customer shall pay all attorneys' fees, collection fees and costs of Company incident to any action brought to enforce the Agreement.

11. **Assignment.** Customer may not assign, transfer or otherwise vest in any other company, entity or person, any of its rights or obligations under the Agreement without the prior written consent of Company.

12. **Miscellaneous.** The Agreement shall be governed by and construed in accordance with the laws of the state of Michigan in which the Facility is located. The price and terms of this proposal are confidential and are not to be disclosed to any other persons or entities. Customer agrees to take all precautions to insure that its officers, employees and agents maintain the confidentiality of this information and do not disclose the price and terms of this proposal. Service Provider is defined as any company working on behalf of a Generator.

13. **Notices.** All notices herein shall be considered as having been given upon being placed in the mail, certified, postage prepaid, addressed to the Company or Customer at the address set forth in the Waste Characterization Profile.

I certify that I am authorized to sign below and all information is complete, factual (including attached information), is an accurate representation of the known and suspected hazards and of waste generator regulations pertaining to the waste described herein and agree to the terms and conditions of waste services in Section 7. Based on our knowledge of the



WASTE INFORMATION

Name of Waste/Common Chemical Name:

Perfluorinated Hydrocarbons

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

Motor flushing

USEPA / STATE WASTE IDENTIFICATION

1. This waste is considered to be:  Non-Hazardous Liquid Industrial Waste  Hazardous Waste  
 2. Regulated by TSCA?  Yes  No (FOIA, etc.)  
 3. List ALL Applicable Waste Codes: D001

PHYSICAL CHARACTERISTICS OF WASTE

Color <input type="checkbox"/> White/Clear <input checked="" type="checkbox"/> Black/Brown <input type="checkbox"/> Other	Suspended Solids <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 1-5% <input type="checkbox"/> 5-20%	Layers <input type="checkbox"/> Multi-Layered <input type="checkbox"/> Bi-Layered <input checked="" type="checkbox"/> Single Phase	Specific Gravity <input type="checkbox"/> 1.0 <input type="checkbox"/> 1.0-1.2 <input type="checkbox"/> 0.8-1.0 <input type="checkbox"/> 1.3-1.4 <input type="checkbox"/> 2.0-1.0	acceptable 13.08.17
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pH:  NA  < 2  2-4  4-6  6-8  8-10  10-12  > 12

Liquid Flash Point:  < 38°F  73-100°F  101-140°F  141-200°F  > 200°F  None  Closed Cap  Open Cap

VOC CONCENTRATION - \_\_\_\_\_ mg/L (MUST BE COMPLETED)

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

CONSTITUENT	MAX	MIN	CONSTITUENT	MAX	MIN
<u>Perfluorinated Hydrocarbons</u>	<u>20</u>	<u>1</u>			
<u>Solids</u>	<u>1</u>	<u>1</u>			

Metals: Indicate if this waste contains any of the following metals. If Generator Knowledge provides backup

Lab Analysis  Generator Knowledge  TQLP  TOTAL

	Not Concentration		Not Concentration			DOY	ppm	ppm	ppm
	Present	ppm	Present	ppm					
PbS	<input type="checkbox"/>	ppm	Aspartic Acids	<input type="checkbox"/>	ppm	1001	ppm	ppm	ppm
Dioxins	<input type="checkbox"/>	ppm	Pesticides	<input type="checkbox"/>	ppm	1002	ppm	ppm	ppm
Cyanides Reactive	<input type="checkbox"/>	ppm	Rodenticides	<input type="checkbox"/>	ppm	1003	ppm	ppm	ppm
Cyanides Total	<input type="checkbox"/>	ppm	Fungicides	<input type="checkbox"/>	ppm	1004	ppm	ppm	ppm
Sulfides Reactive	<input type="checkbox"/>	ppm				1005	ppm	ppm	ppm
Sulfides Total	<input type="checkbox"/>	ppm				1006	ppm	ppm	ppm
						1007	ppm	ppm	ppm
						1008	ppm	ppm	ppm
						1009	ppm	ppm	ppm
						1010	ppm	ppm	ppm
						1011	ppm	ppm	ppm

TQLP 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

- Is this a DOT Hazardous Material (49CFR 172.101 & 173 Subpart D)?  Yes  No
- Reportable Quantity (RQ) in pounds: \_\_\_\_\_
- DOT shipping Name: 30 UNITS 1740 Waste Container, Liquid, Hazardous (Hydroxide), 8 Hazard Class: 8 UN 1740
- Method of Shipment:  Bulk Tanker  Vactor  Rail Car  Drums  Other
- Number of Units to Ship Now: \_\_\_\_\_
- Anticipated Volume / Units per Year: Monthly of  One Time
- 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 quality and personal knowledge of these individuals responsible for shipping or obtaining the information, the information contained here 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 warrant Environmental Geo-Technology Inc. will not be held liable for any inconsistencies. Any conditions Environmental Geo-Technology Inc. makes will be consistent with applicable characterization and/or regulatory requirements.

**GENERATOR'S CHAIN OF CUSTODY RECORD INSTRUCTIONS:** Please collect a representative 1-gal 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 49 CFR 171.1 Appendix I. Fill in the sampling information in the spaces provided below. If you have problems obtaining a representative sample of your waste, please contact your Environmental Geo-Technology representative.