



REPUBLIC
SERVICES

28470 Citrin Drive Romulus, MI 48174
o 734 946 1000 republicservices.com

Jan 25, 2021

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

Re: RIES Monthly Report

Dear Mr. Batka:

Republic Industrial and Energy Solutions, LLC (RIES) hereby submits the eighty-Third 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 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.

The computerized tabulated sheet for Well 2 is absent from this report because Well 2 workover has not been completed. These sheets will be reinstated into this report once Well 2 is restored to service. RIES did not accept F039 waste in October of 2020 so the outside laboratory analyses of Page A-3 of 3 of RIES's EPA two UIC permits do not apply to this report.

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 K. Frost

cc: Rick Sauve (Republic Services)

AVERAGE INJECTION RATE

Calculation of Average Injection Rate

CURRENT REPORTING YEAR 2020CURRENT REPORTING MONTH OCTOBER

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	1,028,530	0	1,028,530
Since facility first injected			19,335,057
MI-163-1W-C011, Well #2-12			
Current Month	0	0	0
Since facility first injected			4,648,763
		Lifetime Combined	23,983,820

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

CalculationsWhole number of months of injection 82

$$\text{_____ lifetime number of months of injection} \times 43,830 \text{ minutes/month} \\ = \underline{3,594,060} \text{ minutes of injection}$$

$$\text{Lifetime combined injected volume } \underline{23,983,820} \div \underline{3,594,060} \text{ minutes of injection} \\ = \underline{6.7} \text{ gpm average injection rate}$$

WELL 1 DATA



Well 01 Monthly Data

	Injection Pressure (psi _g)		Annulus Tank Level (in)		Annulus Pressure (psi _g)		Injection pH		Flow Rate (gpm)		Differential Pressure (psi _g)	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
10/1/20	-1.4	-0.5	22.7	22.7	712.6	725.2	7.0	8.5	0.0	0.4	713.5	726.4
10/2/20	309.0	811.5	-1.9	22.7	1221.0	1,349.9	0.0	7.9	0.0	84.3	538.0	1,053.9
10/3/20	122.1	128.5	21.0	21.0	1,083.8	1,114.5	1.5	1.5	0.0	0.5	961.6	986.0
10/4/20	120.7	122.1	21.0	21.0	1,065.5	1,083.8	1.5	1.5	0.0	0.4	944.8	961.6
10/5/20	119.7	120.7	21.0	21.0	1,048.9	1,065.5	1.4	1.5	0.0	0.4	929.2	944.8
10/6/20	97.2	815.3	21.0	21.1	1,028.2	1,350.0	0.0	8.1	0.0	88.4	532.9	977.0
10/7/20	111.2	848.3	21.1	21.1	1,041.3	1,350.0	1.5	8.1	0.0	85.3	501.7	990.6
10/8/20	318.0	873.8	21.0	21.1	981.0	1,349.9	0.0	7.6	0.0	83.1	475.2	1,022.6
10/9/20	273.0	857.2	21.0	21.1	1,103.0	1,349.9	0.0	8.6	0.0	86.8	438.0	1,041.7
10/10/20	132.3	728.1	21.1	21.2	992.2	1,265.9	5.1	9.1	0.0	83.5	526.4	884.5
10/11/20	126.3	132.3	21.1	21.1	972.1	992.2	6.8	6.8	0.0	0.4	845.8	859.9
10/12/20	262.0	777.8	21.1	21.1	1,025.0	1,350.0	0.0	7.6	0.0	83.0	532.0	964.5
10/13/20	103.1	796.3	21.1	21.1	990.0	1,350.0	0.0	7.7	0.0	83.0	520.0	952.6
10/14/20	96.8	854.9	21.1	21.1	979.2	1,350.0	0.0	7.6	0.0	83.2	494.1	930.1
10/15/20	112.5	869.9	21.1	21.1	972.4	1,350.0	0.2	6.9	0.0	82.8	459.9	885.4
10/16/20	116.3	872.1	21.0	21.1	949.8	1,350.0	0.0	7.3	0.0	86.9	420.5	911.7
10/17/20	138.7	767.2	21.0	21.1	911.8	1,190.6	0.2	7.3	0.0	83.6	413.7	797.8
10/18/20	130.7	138.7	21.0	21.0	901.2	916.4	6.2	6.2	0.0	0.4	770.5	777.7
10/19/20	128.2	848.8	21.0	21.0	897.4	1,325.5	0.0	6.6	0.0	83.4	422.2	848.1
10/20/20	113.9	846.0	21.0	21.0	916.4	1,329.0	0.0	6.8	0.0	83.3	413.7	854.0
10/21/20	116.6	854.6	21.0	21.0	915.3	1,337.9	3.4	7.0	0.0	83.3	412.1	841.9
10/22/20	455.0	881.3	21.0	21.0	1,046.0	1,336.1	0.0	7.7	0.0	82.9	386.0	1,283.8
10/23/20	87.7	879.5	21.0	21.0	887.2	1,347.8	0.0	6.6	0.0	87.4	364.5	898.4
10/24/20	140.8	765.0	20.9	20.9	844.0	1,128.9	1.2	8.8	0.0	85.3	344.5	737.8
10/25/20	132.4	140.8	20.9	20.9	841.0	853.5	6.9	7.1	0.0	0.4	708.6	713.5
10/26/20	303.0	816.2	20.9	20.9	837.7	1,227.5	0.8	6.9	0.0	83.3	349.9	1,143.2
10/27/20	113.2	823.5	20.9	20.9	851.0	1,237.7	0.7	6.6	0.0	82.7	360.0	766.6
10/28/20	120.0	863.2	20.9	20.9	852.2	1,210.4	0.5	6.9	0.0	82.8	320.7	753.8
10/29/20	123.9	851.5	20.9	20.9	835.9	1,234.2	0.0	6.6	0.0	82.6	323.8	756.0
10/30/20	120.5	861.6	20.9	20.9	815.9	1,192.7	0.7	6.6	0.0	82.8	287.5	731.3
10/31/20	111.6	124.6	20.9	20.9	792.2	815.9	5.9	5.9	0.0	0.4	680.5	691.3

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)

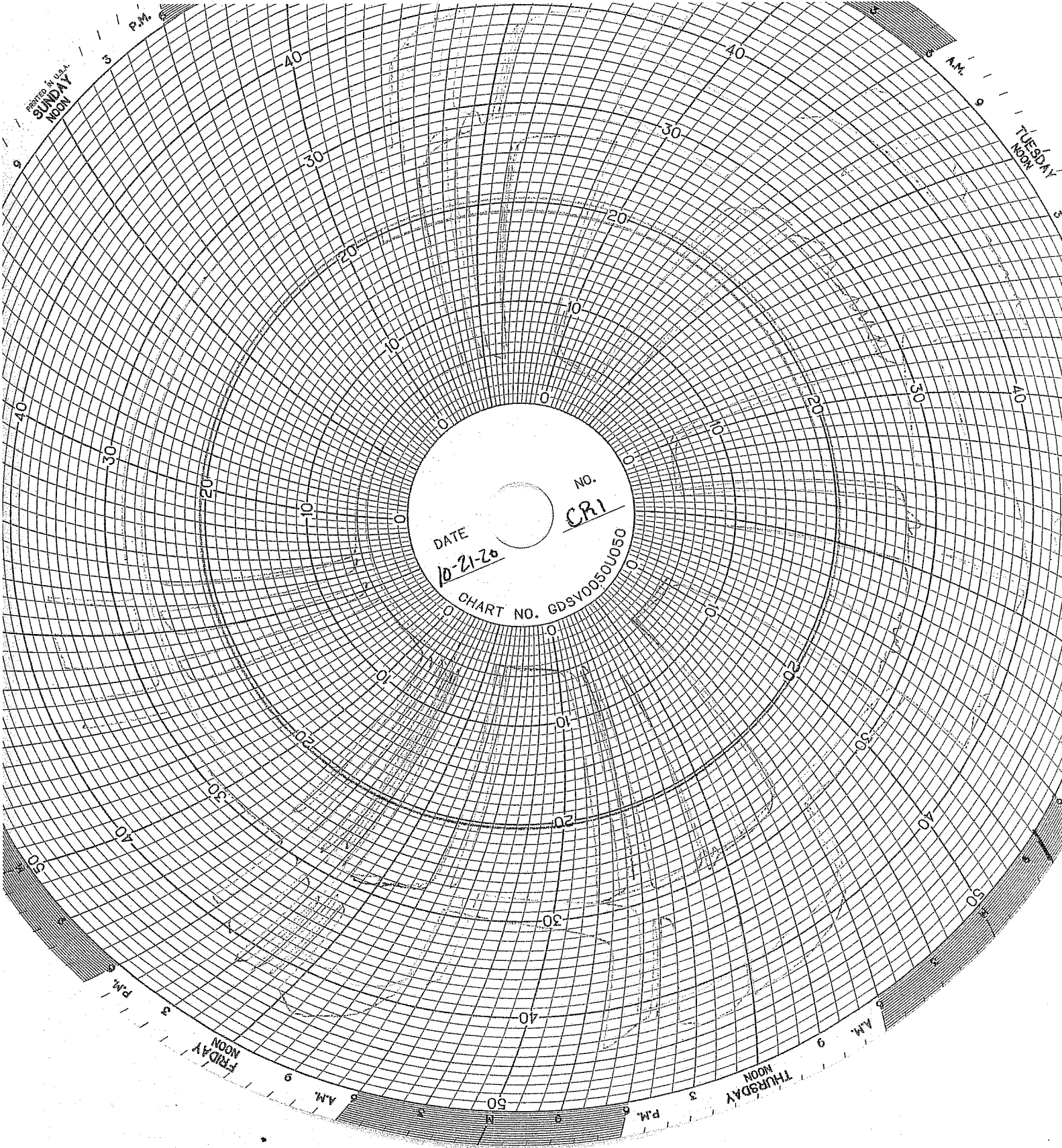
PRINTED IN U.S.A.
SUNDAY
NOON

TUESDAY
NOON

FRIDAY
NOON

THURSDAY
NOON

DATE 10-21-70 No. CRI
CHART NO. 6DSV0050U050



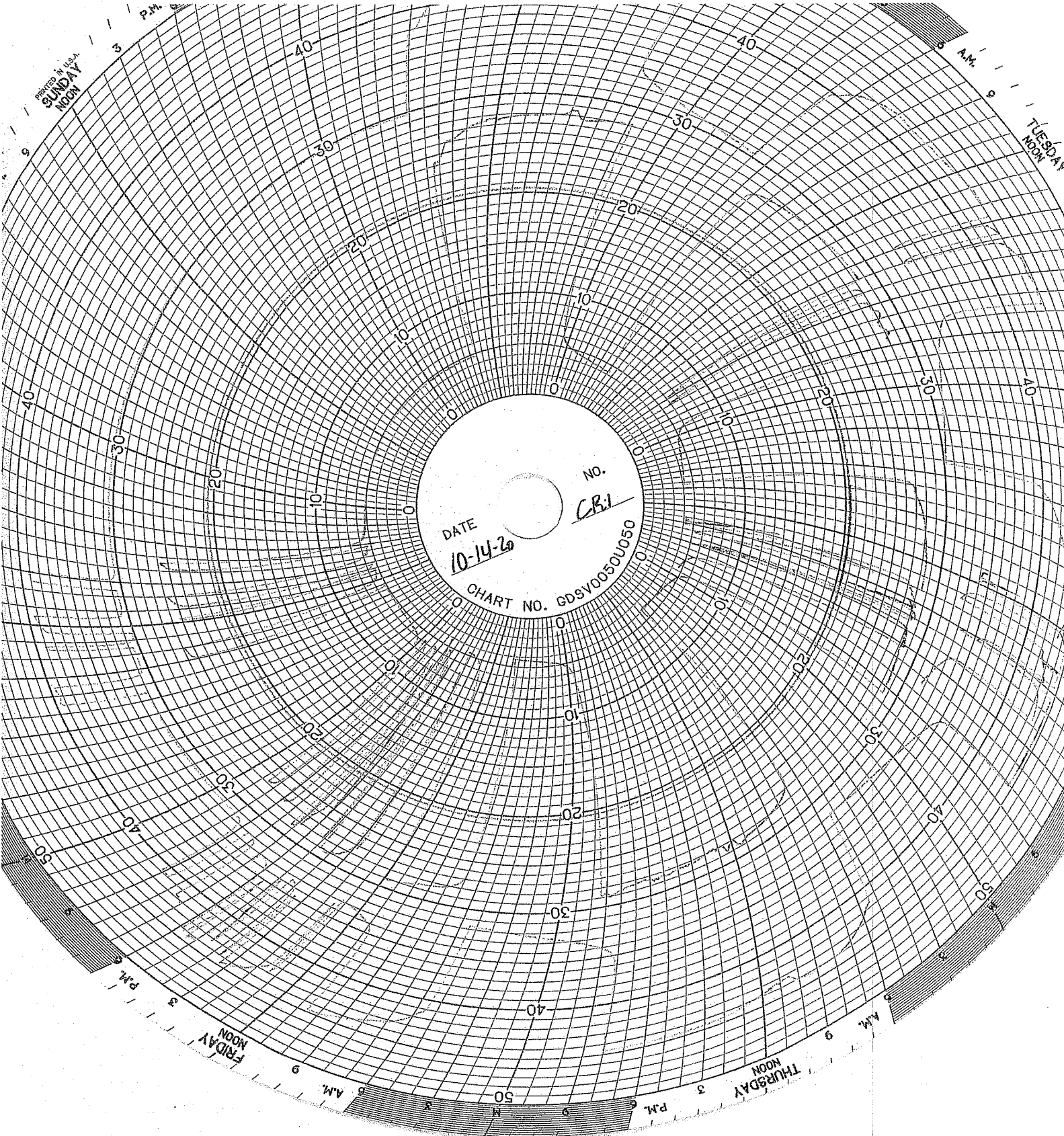
PRINTED IN U.S.A.
SUNDAY
NOON

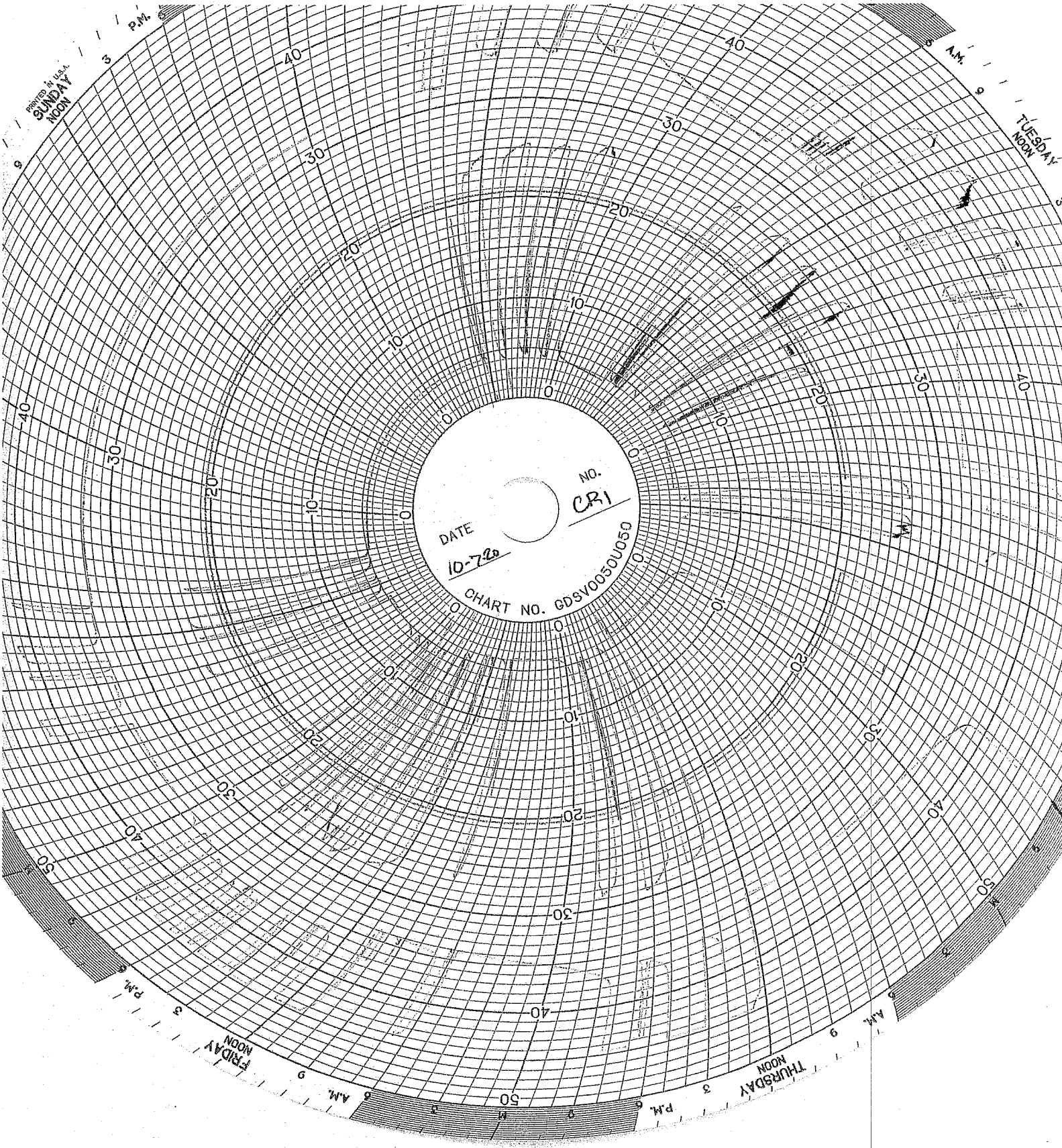
TUESDAY
NOON

DATE
10-14-26

No.
CB1

CHART NO. GDSV0050U050





PRINTED IN U.S.A.
SUNDAY
NOON

TUESDAY
NOON

FRIDAY
NOON

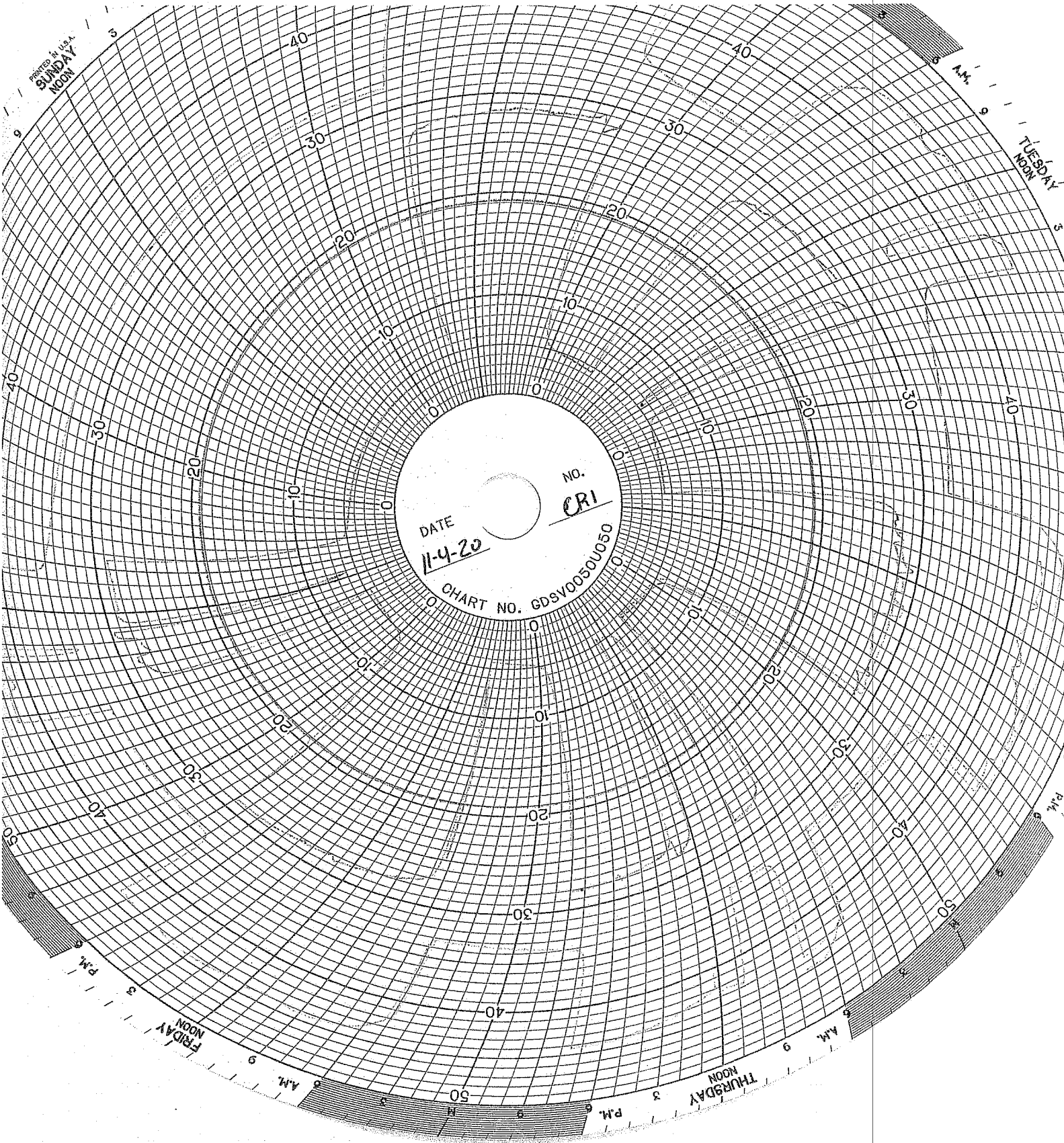
THURSDAY
NOON

DATE

10-7-20

NO.
CR1

CHART NO. GDSY0050U050



DATE
11-4-20

No.
CR1

CHART NO. GDSV0050U050

PRINTED IN U.S.A.
SUNDAY
NOON

TUESDAY
NOON

THURSDAY
NOON

FRIDAY
NOON

9
A.M.

9
A.M.

9
P.M.

9
P.M.

WELL 2 DATA

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

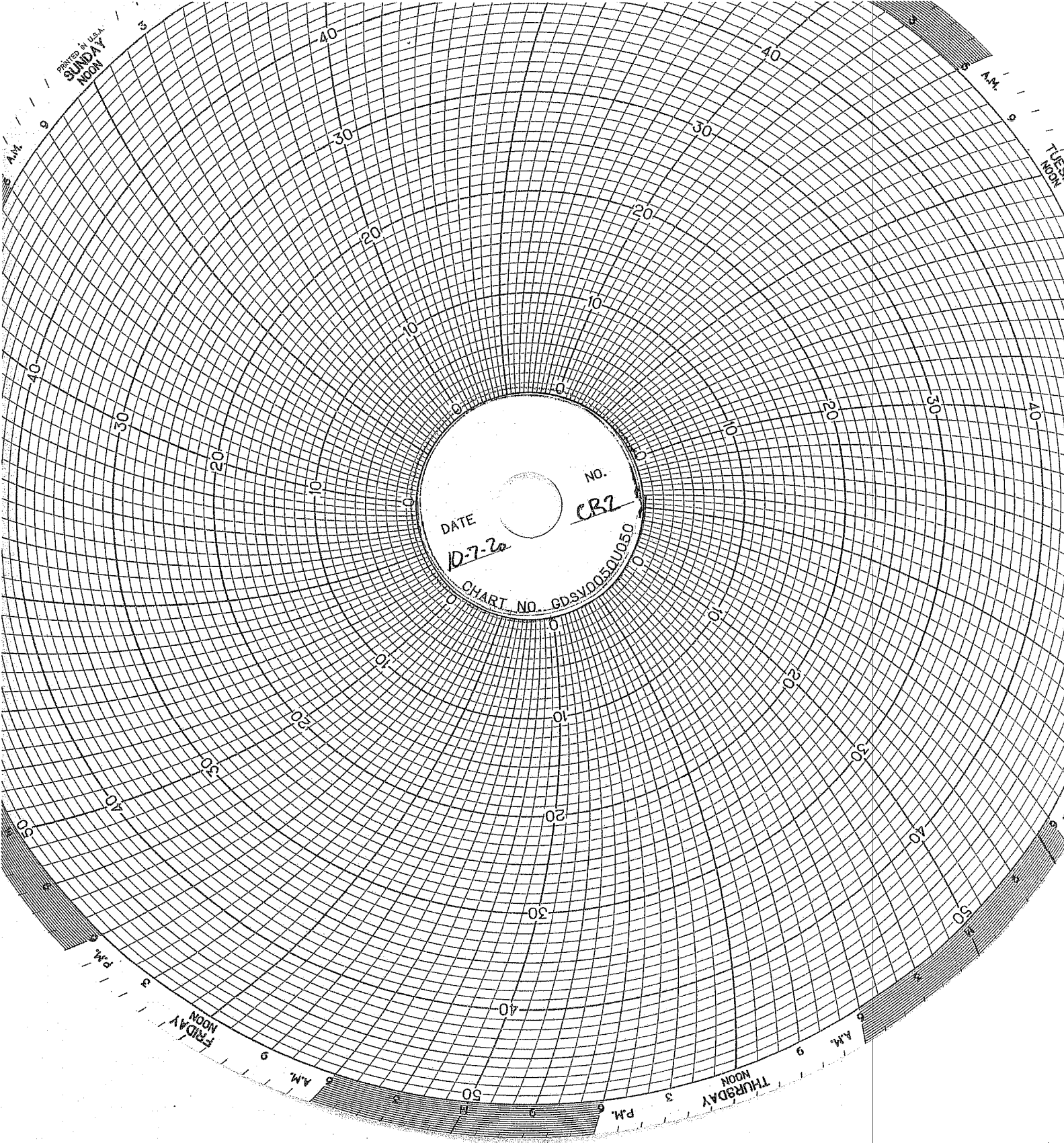
Red Pen - Well 1 Monthly Volume (chart value x 100,000)

Channel #3

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

Channel #4

Black Pen - Temperature (chart value x 0)



PRINTED IN U.S.A.
SUNDAY
NOON

TUESDAY
NOON

THURSDAY
NOON

FRIDAY
NOON

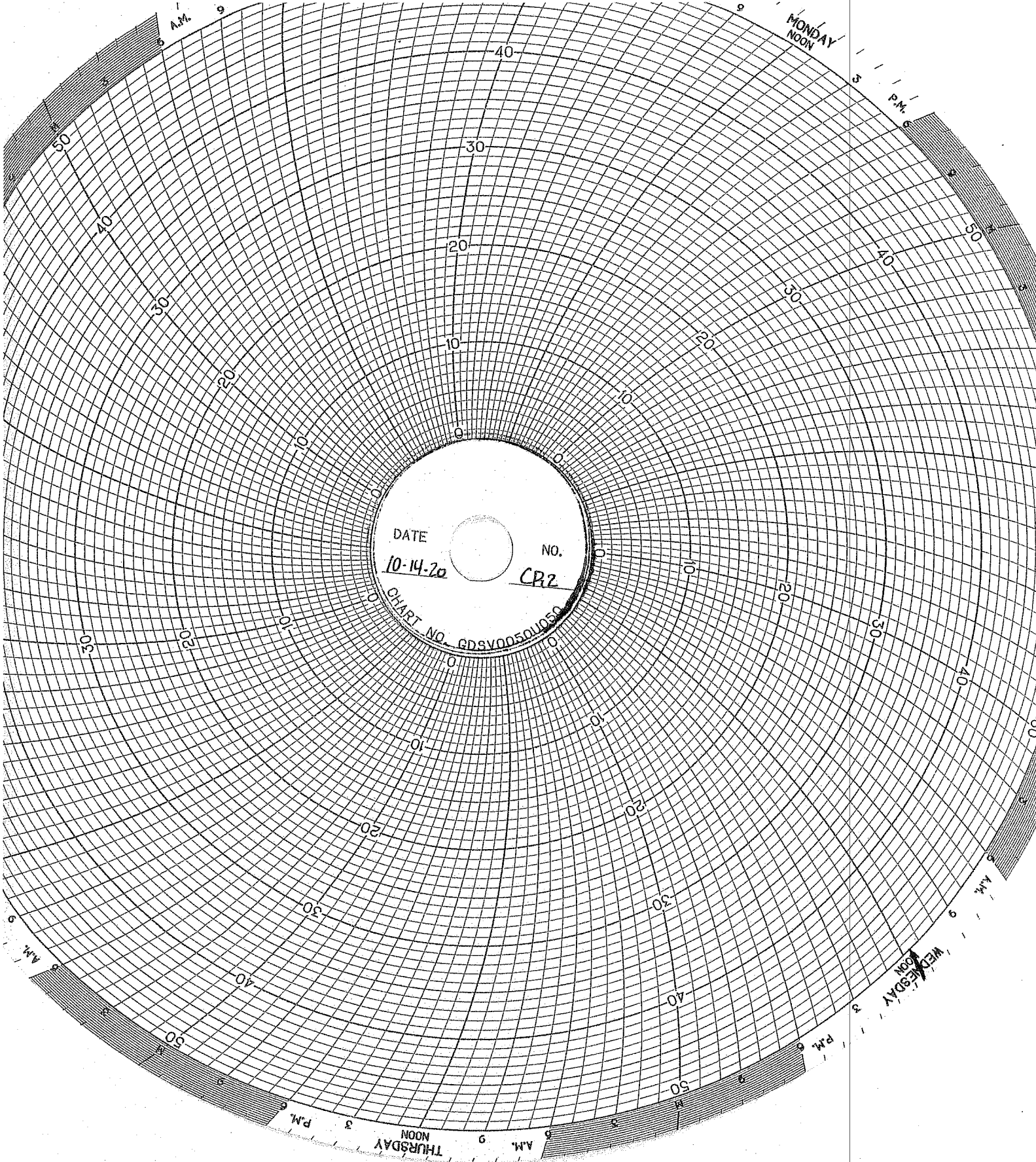
DATE

10-7-20

No.

CB2

CHART NO. GDSV00350050



DATE

10-14-20

NO.

CR2

CHART NO.

GDSV00501050

MONDAY
NOON

P.M.

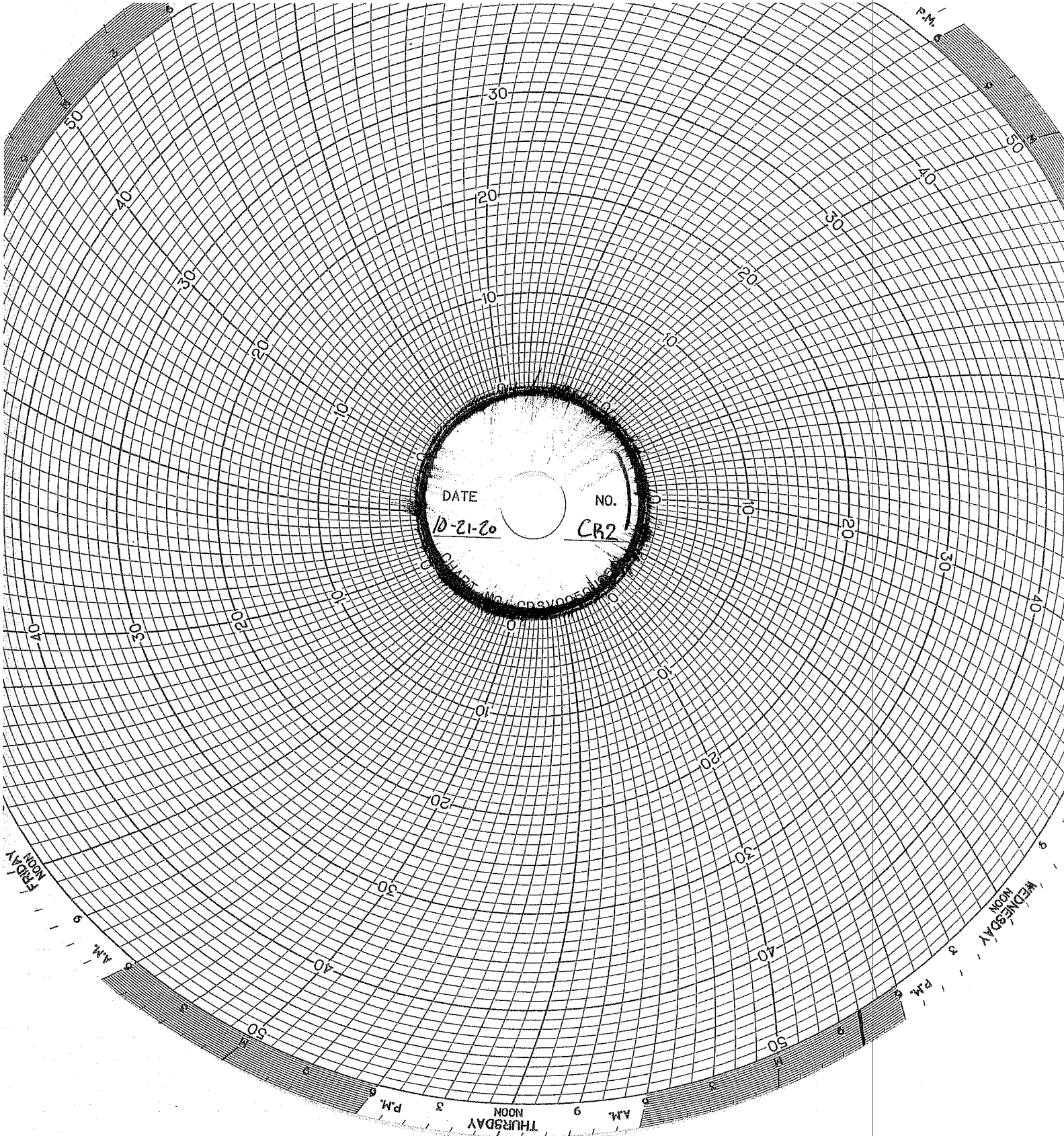
WEDNESDAY
NOON

A.M.

THURSDAY
NOON

A.M.

P.M.



DATE

10-21-20

NO.

CR2

P.M.

40

30

20

10

0

10

20

30

40

50

60

70

80

90

100

110

120

130

140

150

160

170

180

190

200

FRIDAY

NOON

9

AM

5

4

3

2

1

0

1

2

3

4

5

6

7

8

9

THURSDAY

NOON

3

P.M.

9

8

7

6

5

4

3

2

1

WEDNESDAY

NOON

3

P.M.

9

8

7

6

5

4

3

2

1

0

1

2

3

4

5

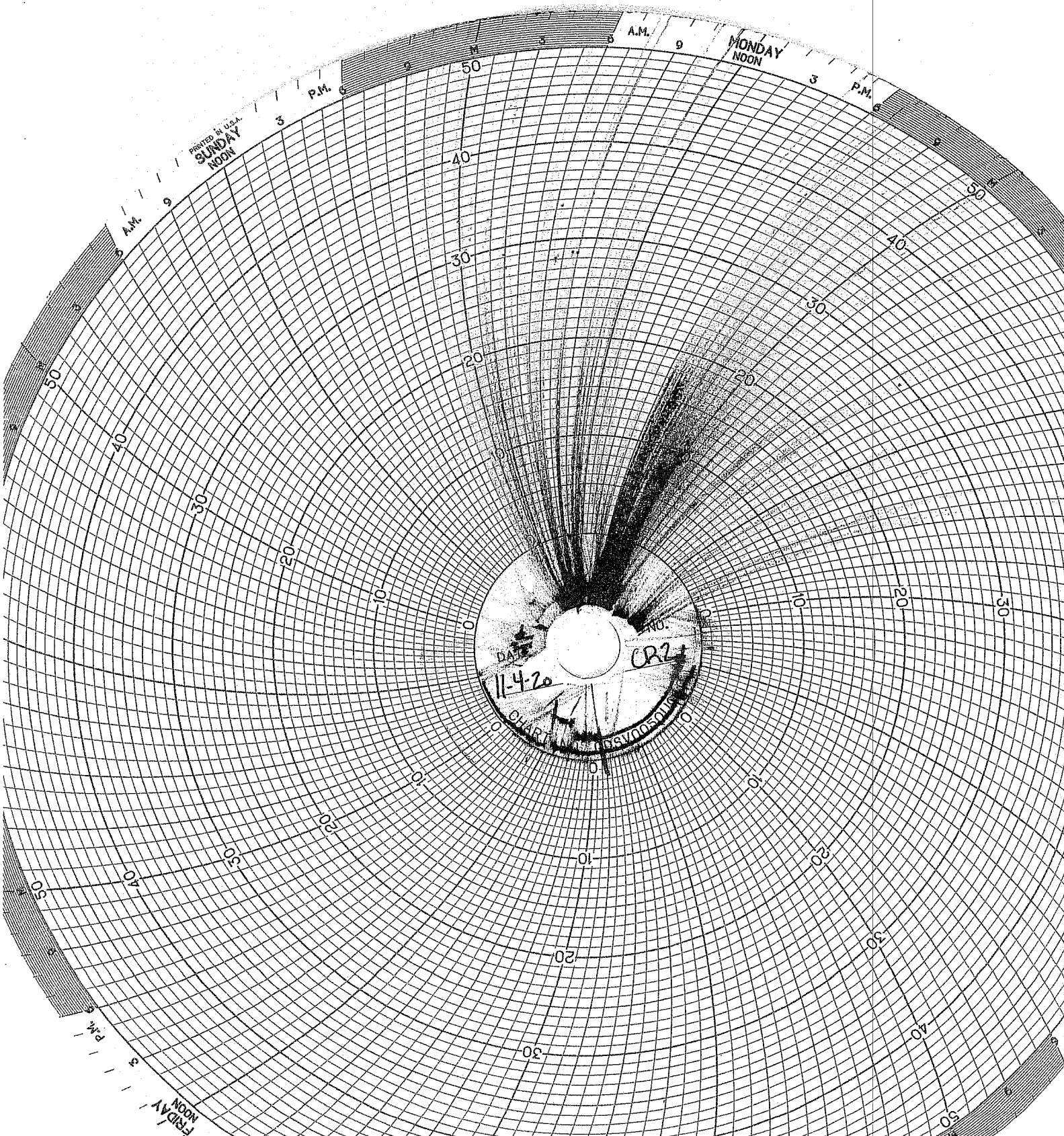
6

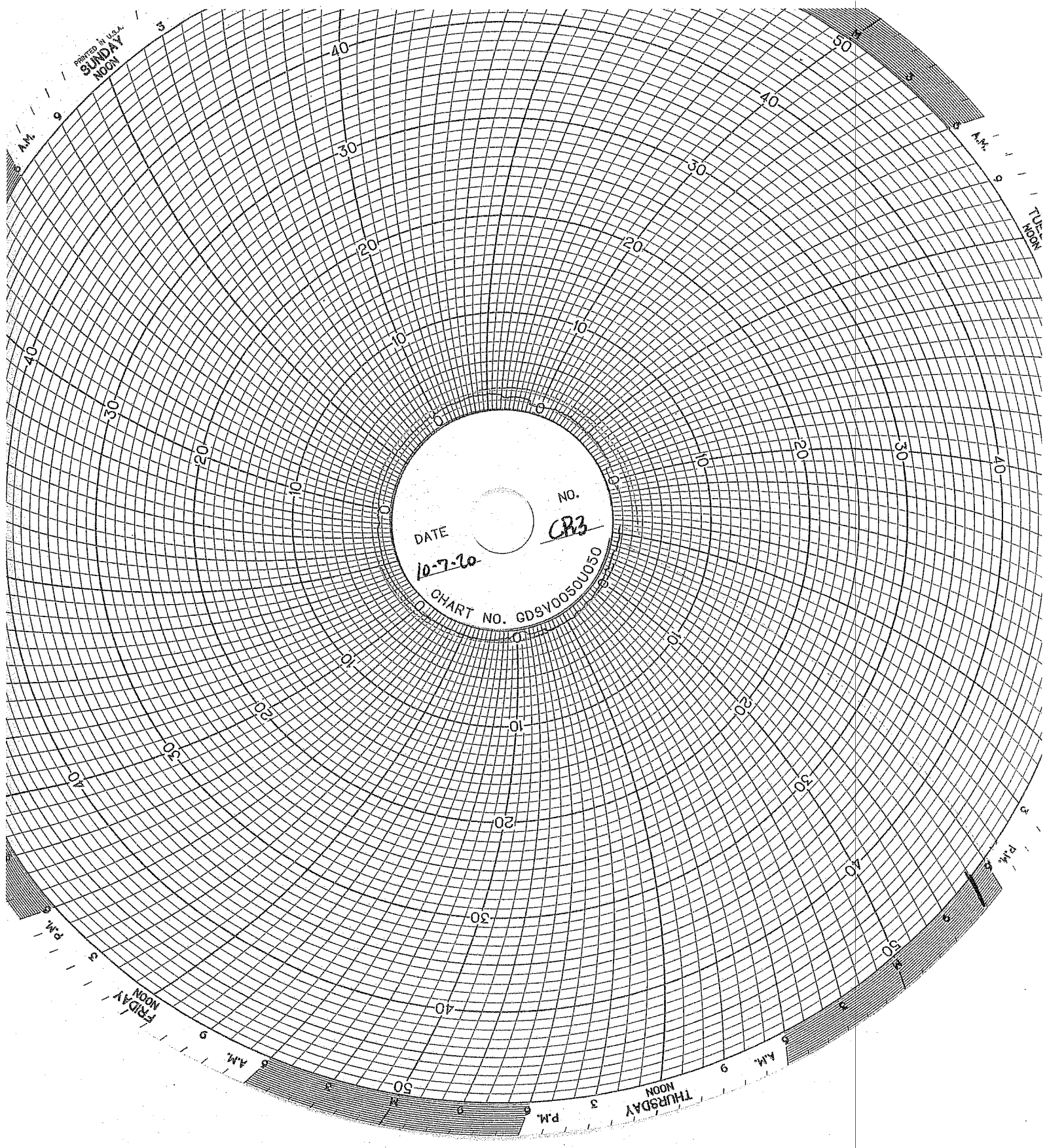
7

Printed in U.S.A.
SUNDAY
NOON

MONDAY
NOON

DATE 11-4-20
CR21





PRINTED IN U.S.A.
SUNDAY
NOON

9 A.M.
TUESDAY
NOON

DATE
10-7-10

NO.
CR3

CHART NO. GDSV0050U050

FRIDAY
NOON

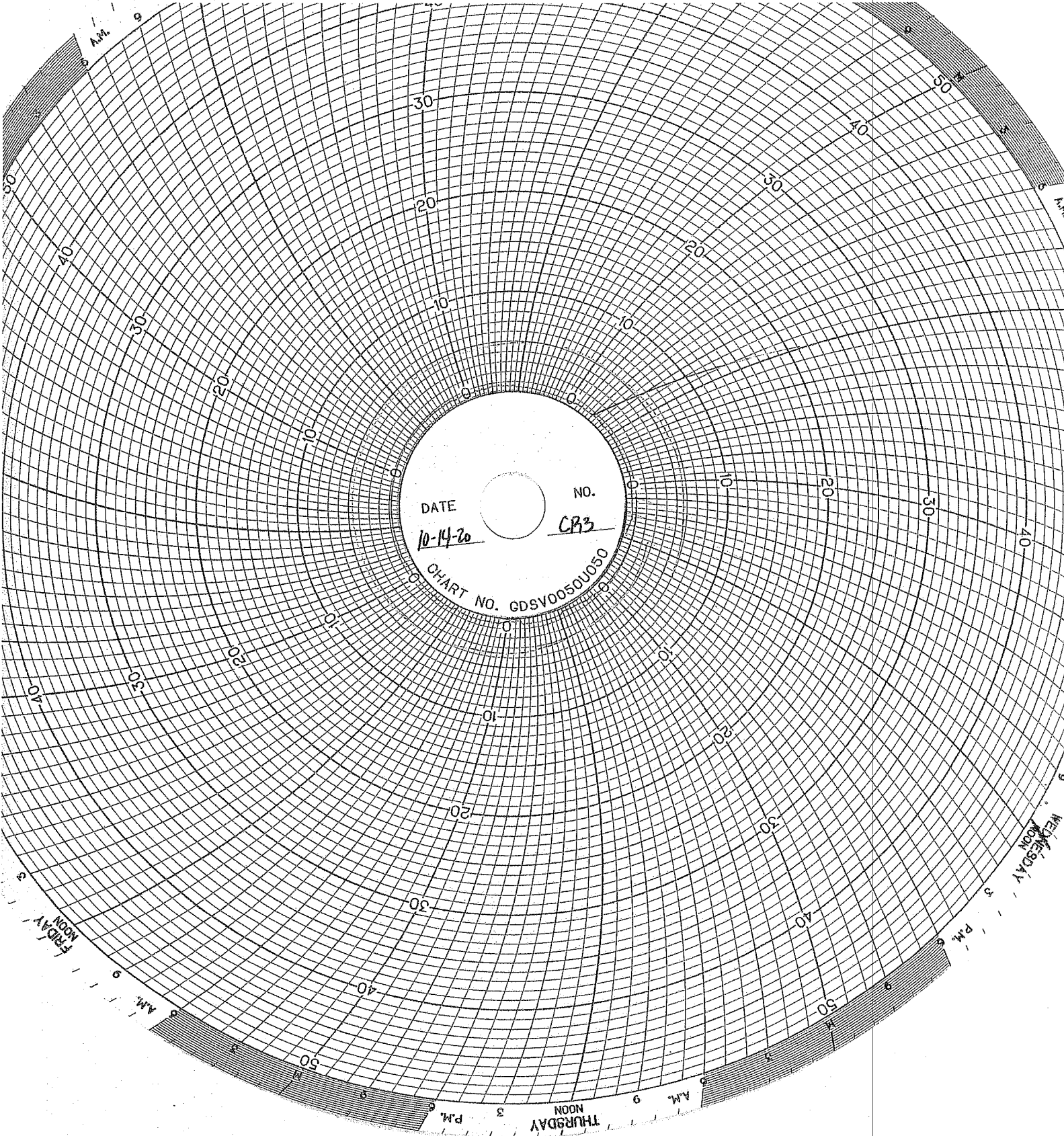
THURSDAY
NOON

9 A.M.

9 A.M.

3 P.M.

3 P.M.



DATE

10-14-20

NO.

CB3

CHART NO. GDSV0050U050

THURSDAY

NOON

P.M.

3

A.M.

9

WEDNESDAY

NOON

P.M.

3

P.M.

6

FRIDAY

NOON

A.M.

9

A.M.

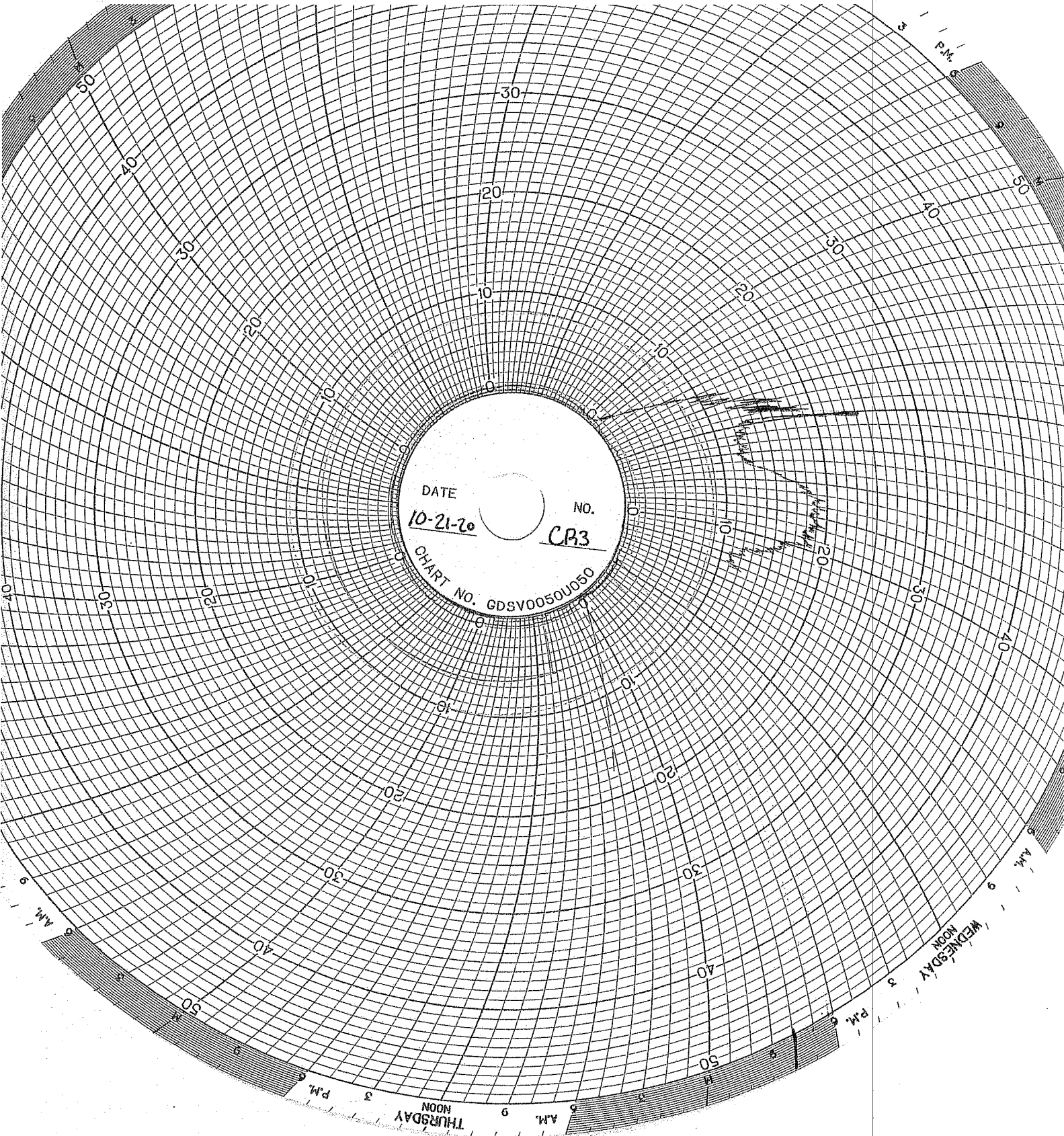
9

A.M.

9

A.M.

9



DATE
10-21-70

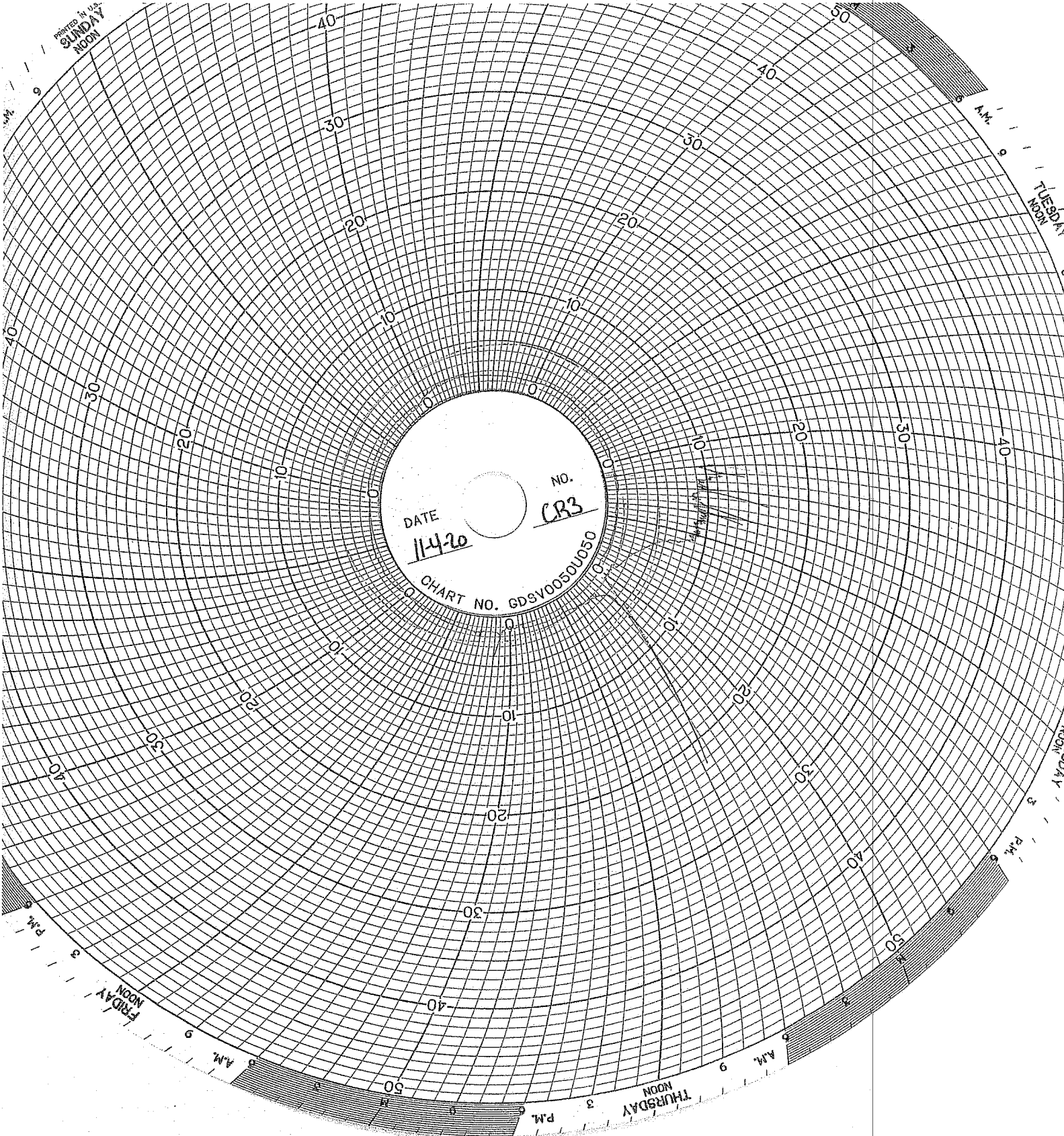
NO.
CP3

CHART NO. GDSV0050U050

THURSDAY
NOON
A.M.

WEDNESDAY
NOON
P.M.

P.M.



PRINTED IN U.S.A.
SUNDAY
NOON

TUESDAY
NOON

WEDNESDAY
NOON

THURSDAY
NOON

FRIDAY
NOON

DATE
11-4-20

NO.
CR3

CHART NO. GDSV00501050

CORROSION MONITORING

COOROSION MONITORING COUPONS VISUAL DESCRIPTION

October, 2020

Fiberglass Coupon

The coupon is dark orange (rust) 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.

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.

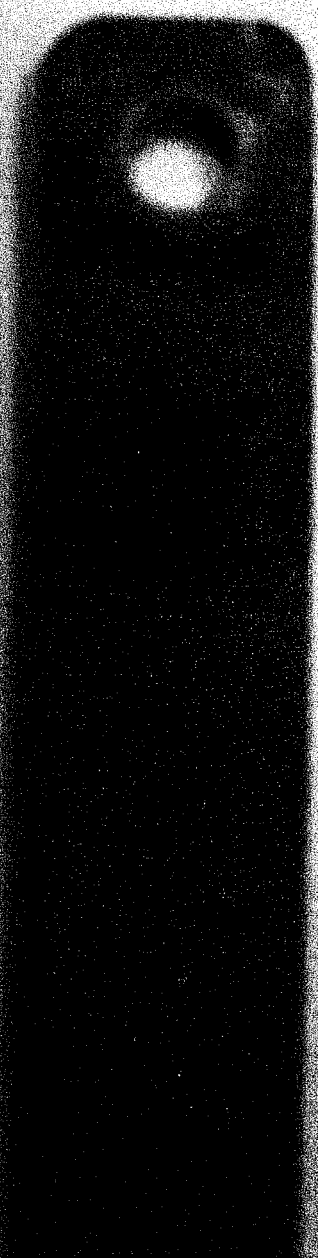
Stainless Steel Coupon

No change to this coupon since last month. There has been no significant pumping on the wells and no significant exposure to hazardous waste since October 2018.

10/19/2020

Serial: C2765

Rht: 13.282



te: 10/19/2020

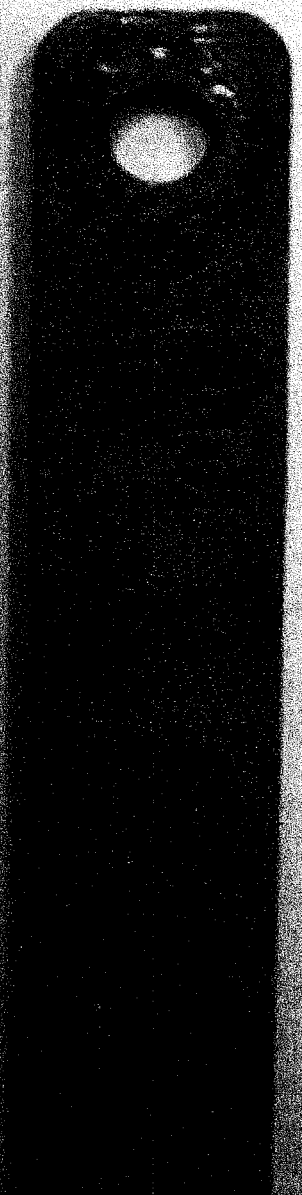
aterial: Fiberglass

ight: 17.621

10/19/2020

ial: C1563 / 316L

t: 9.737



**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	
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	New stainless steel coupon
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 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	13.283g	9.730g	17.658g	

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:

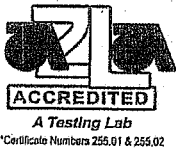
John Frost
Environmental Geo-Technologies, LLC
28470 Citrin Drive
Romulus, MI 48174

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

ISO 9001:2008
Registered

Letters and reports are for the exclusive use of the clients to whom they are addressed and shall not be reproduced, except in full, without the written permission of Akron Rubber Development Laboratory, Inc. (ARDL). The information contained herein applies to the specific material, products or processes tested or evaluated. No warranty of any kind is herein construed or implied. The liability of ARDL, Inc. shall be limited to the amount of consideration paid for services. ARDL, Inc. is ISO 17025 accredited by A2LA for the test methods listed on the attached scope.



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

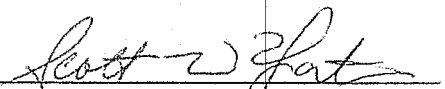
96

Prepared By:


Melissa Martin
Sr. Project Technician

to

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 Drummond
Physical Testing, Manager

Rev 041916



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

ISO 9001:2008
Registered

Letters and reports are for the exclusive use of the clients to whom they are addressed and shall not be reproduced, except in full, without the written permission of Akron Rubber Development Laboratory, Inc. (ARDL). The information contained herein applies to the specific material, products or processes tested or evaluated. No warranty of any kind is herein construed or implied. The liability of ARDL, Inc. shall be limited to the amount of consideration paid for services. ARDL, Inc. is ISO 17025 accredited by A2LA for the test methods listed on the referenced certificates.



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

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

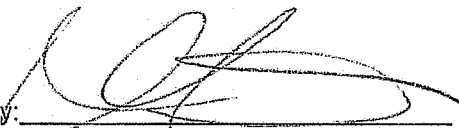
PN 139140
PO#

PLASTIC TESTING DEPARTMENT

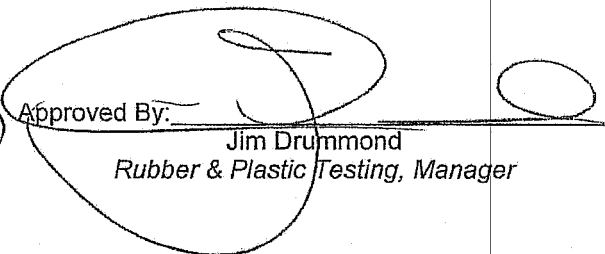
Prepared For:

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



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

ISO 9001:2008
Registered

Letters and reports are for the exclusive use of the clients to whom they are addressed and shall not be reproduced, except in full, without the written permission of Akron Rubber Development Laboratory, Inc. (ARDL). The information contained herein applies to the specific material, products or processes tested or evaluated. No warranty of any kind is herein construed or implied. The liability of ARDL, Inc. shall be limited to the amount of consideration paid for services. ARDL, Inc. is ISO 17025 accredited by A2LA for the test methods listed on the referenced certificates.



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) 885-3535
FAX (313) 885-1771

Report Date: November 15, 2013
Test Date: October 15 - November 14, 2013

Report #1310-77651
Performed for:
Environmental Geo-Technologies
28470 Citrin Drive
Romulus, MI 48174

Attention: Mr. Don Anderson

WORK REQUESTED:

Perform Barcol Hardness test on sample submitted.

DESCRIPTION OF SAMPLE:

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

WORK PERFORMED:

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

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

RESULTS:

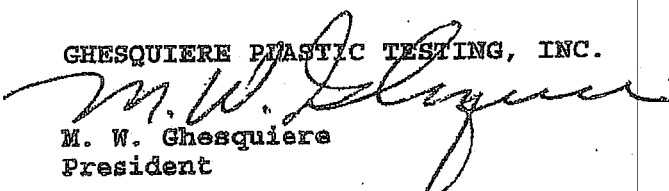
The following determination was made based upon the above test:

BARCOL HARDNESS

	<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

Our letters and reports are for the exclusive use of the client to whom they are addressed, and shall not be reproduced except in full without our written approval. Our letters and reports apply only to the sample tested and are not necessarily indicative of the qualities of apparently identical or similar products. The letters and reports and the name of Ghesquiere Plastic Testing, Inc., are not to be used under any circumstances in advertising to the general public. Samples, extra and related test materials will be destroyed 30 days after the date of the final report unless the client indicates otherwise in writing.

TOTAL 1 PAGES

GHESQUIERE PLASTIC TESTING, INC.

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

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

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

Attention: Mr. Don Anderson

WORK REQUESTED:

Perform Barcol Hardness test on sample submitted.

DESCRIPTION OF SAMPLE:

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

WORK PERFORMED:

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

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

RESULTS:

The following determination was made based upon the above test:

BARCOL HARDNESS

Hardness

Specimen 1: 90

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

GHESQUIERE PLASTIC TESTING, INC.

M. W. Ghesquiere
President

MWG/dm

Our letters and reports are for the exclusive use of the client to whom they are addressed, and shall not be reproduced except in full without our written approval. Our letters and reports apply only to the sample tested and are not necessarily indicative of the qualities of apparently identical or similar products. The letters and reports and the name of Ghesquiere Plastic Testing, Inc., are not to be used under any circumstances in advertising to the general public. Samples, extra and related test materials will be destroyed 30 days after the date of the final report unless the client indicates otherwise in writing.

TOTAL 1 PAGES

Ghesquiere Plastic Testing, Inc.

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

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

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

Attention: Mr. Don Anderson

WORK REQUESTED:

Perform Barcol Hardness test on sample submitted.

DESCRIPTION OF SAMPLE:

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

WORK PERFORMED:

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

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

RESULTS:

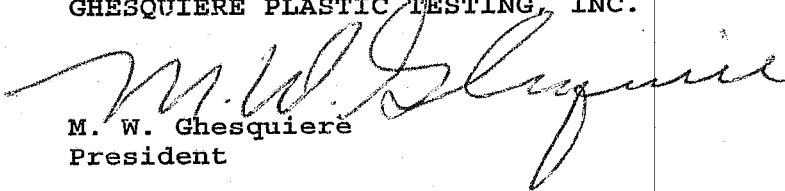
The following determination was made based upon the above test:

BARCOL HARDNESS

	<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

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
Sf. 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

ISO 9001:2008
Registered

Letters and reports are for the exclusive use of the clients to whom they are addressed and shall not be reproduced, except in full, without the written permission of Akron Rubber Development Laboratory, Inc. (ARDL). The information contained herein applies to the specific material, products or processes tested or evaluated. No warranty of any kind is herein construed or implied. The liability of ARDL, Inc. shall be limited to the amount of consideration paid for services. ARDL, Inc. is ISO 17025 accredited by A2LA for the test methods listed on the attached scope.

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

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.

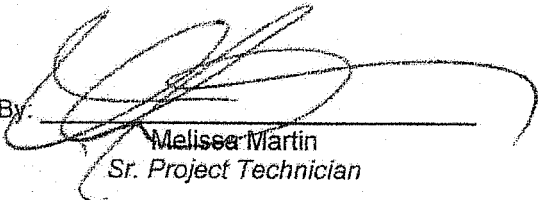
BARCOL HARDNESS ASTM D 2583-13a

Results

Barcol Hardness, Instant

97

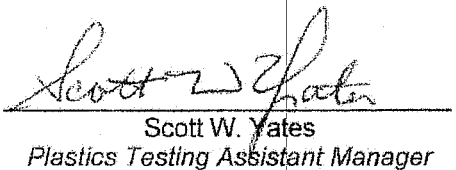
Prepared By:



Melisse Martin
Sr. Project Technician

st

Approved By:



Scott W. Yates
Plastics Testing Assistant Manager

MAINTENANCE

UIC Monthly Maintenance Log

10/2/2020	Well 1	End annual mechanical integrity test
10/2/2020	Well 2	End annual mechanical integrity test

INJECTION FINGERPRINTS

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	10/06-2020
Receiving ID#	B100620 01
Manifest #	Line 0009870
Land Ban Cert included	Yes No
EGT Approval #	01416
Generator	CFL
Client	
Transporter	KRD
Time in	0925
Time out	1020
Received by	J.H
Sampled by	BB

LAB INFORMATION	
Compatible? (RT#)	Y
PCBs (ppm) (Oily Waste Only)?	N/A
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 140
pH (S.U.)	8
Cyanides? (mg/L)	< 30
Sulfides? (ppm)?	< 250
Specific Gravity	1.02
Physical Description	Liquid
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	64.4
Conductivity	36.9 ms
% Solids	3.39
Turbidity	Yes No
Color	Black
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	10/7-2020
Receiving ID#	B100720 04
Manifest #	Line 0001519
Land Ban Cert included	Yes No
EGT Approval #	01415
Generator	C3C
Client	
Transporter	KRB
Time in	13:20
Time out	14:25
Received by	J.H
Sampled by	BB

LAB INFORMATION	
Compatible? (RT#)	<input checked="" type="checkbox"/>
PCBs (ppm) (Oily Waste Only)?	N/A
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 140
pH (S.U.)	8
Cyanides? (mg/L)	< 30
Sulfides? (ppm)?	< 200
Specific Gravity	1.02
Physical Description	liquid
Stream Consistency	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Oil in Sample?	Yes <input checked="" type="checkbox"/> No
Temperature (F)	71.8
Conductivity	33.6 mS
% Solids	2.22
Turbidity	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Color	Black
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	10/9-2020
Receiving ID#	B100920 01
Manifest #	Line 0009873
Land Ban Cert included	Yes No
EGT Approval #	d/ML
Generator	CFL
Client	
Transporter	KRD
Time in	0630
Time out	0720
Received by	J.H.
Sampled by	BB

LAB INFORMATION	
Compatible? (RT#)	Y
PCBs (ppm) (Oily Waste Only)?	N/A
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	8
Cyanides? (mg/L)	<30
Sulfides? (ppm)?	<200
Specific Gravity	1.03
Physical Description	liquid
Stream Consistency	(Yes) No
Oil in Sample?	Yes (No)
Temperature (F)	63.4
Conductivity	38.7ms
% Solids	2.22
Turbidity	(Yes) No
Color	Black
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	10-13-20
Receiving ID#	B10132002
Manifest #	Line 0009865
Land Ban Cert included	Yes No
EGT Approval #	01416
Generator	CFR
Client	
Transporter	KRD
Time in	10:30
Time out	11:30
Received by	J.H.
Sampled by	AW

LAB INFORMATION	
Compatible? (RT#)	✓
PCBs (ppm) (Oily Waste Only)?	N/A
TOC ppm (CC Waste Only)?	
Flash Point (F)	140
pH (S.U.)	8.21
Cyanides? (mg/L)	< 30
Sulfides? (ppm)?	< 200
Specific Gravity	1.02
Physical Description	liquid
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	68.1
Conductivity	38.1 mS
% Solids	2-13
Turbidity	Yes No
Color	Black
TSS (%)	50.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	10/15-2020
Receiving ID#	B101520 03
Manifest #	0001510
Line	
Land Ban Cert included	Yes No
EGT Approval #	01415
Generator	CIC
Client	
Transporter	KRD
Time in	10:10
Time out	
Received by	J.H.
Sampled by	BB

LAB INFORMATION	
Compatible? (RT#)	<input checked="" type="checkbox"/>
PCBs (ppm) (Oily Waste Only)?	N/A
TOC ppm (CC Waste Only)?	
Flash Point (F)	8 > 140
pH (S.U.)	
Cyanides? (mg/L)	< 30
Sulfides? (ppm)?	< 200
Specific Gravity	1.02
Physical Description	1.9 gr/d
Stream Consistency	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Oil in Sample?	Yes <input checked="" type="checkbox"/> No
Temperature (F)	64.2
Conductivity	22.0
% Solids	1.56
Turbidity	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Color	Black
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	10-16-20
Receiving ID#	B10162004
Manifest #	Line 0002200
Land Ban Cert included	Yes No
EGT Approval #	01415
Generator	CFC
Client	KRS
Transporter	KRS
Time in	13:15
Time out	14:15
Received by	J.H.
Sampled by	AW

LAB INFORMATION	
Compatible? (RT#)	
PCBs (ppm) (Oily Waste Only)?	N/A
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	8
Cyanides? (mg/L)	<30
Sulfides? (ppm)?	<200
Specific Gravity	1.02
Physical Description	liquid
Stream Consistency	<input checked="" type="radio"/> Yes <input type="radio"/> No
Oil in Sample?	Yes <input type="radio"/> <input checked="" type="radio"/> No
Temperature (F)	64.0
Conductivity	21.9 mS
% Solids	2-3.0
Turbidity	<input checked="" type="radio"/> Yes <input type="radio"/> No
Color	Black
TSS (%)	<0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	10/20-2020
Receiving ID#	B10202001
Manifest #	Line
	0002028
Land Ban Cert included	Yes No
EGT Approval #	01416
Generator	CFL
Client	
Transporter	KRD
Time in	0915
Time out	1005
Received by	J.H
Sampled by	BB

LAB INFORMATION	
Compatible? (RT#)	<input checked="" type="checkbox"/>
PCBs (ppm) (Oily Waste Only)?	N/A
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 140
pH (S.U.)	
Cyanides? (mg/L)	< 36
Sulfides? (ppm)?	< 260
Specific Gravity	1.02
Physical Description	Liquid
Stream Consistency	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Oil in Sample?	Yes <input checked="" type="checkbox"/> No
Temperature (F)	63.7
Conductivity	38.1 mS
% Solids	1.97
Turbidity	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Color	Black
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	10/21-2020
Receiving ID#	B162120 03
Manifest #	Line 0009890
Land Ban Cert included	Yes No
EGT Approval #	01416
Generator	CFZ
Client	
Transporter	KRD
Time in	12:20
Time out	15:00
Received by	J.H
Sampled by	BB

LAB INFORMATION	
Compatible? (RT#)	Y
PCBs (ppm) (Oily Waste Only)?	N/A
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 140
pH (S.U.)	8
Cyanides? (mg/L)	< 30
Sulfides? (ppm)?	< 200
Specific Gravity	1.02
Physical Description	1.94 g
Stream Consistency	<input checked="" type="radio"/> Yes <input type="radio"/> No
Oil in Sample?	Yes <input type="radio"/> No <input checked="" type="radio"/>
Temperature (F)	71.0
Conductivity	36.0 mS
% Solids	2.22
Turbidity	<input checked="" type="radio"/> Yes <input type="radio"/> No
Color	Brown
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	10/23-2020
Receiving ID#	B102320 01
Manifest #	Line 0009893
Land Ban Cert included	Yes No
EGT Approval #	01416
Generator	CPL
Client	
Transporter	KRD
Time in	07:00
Time out	08:20
Received by	J.H.
Sampled by	BB

LAB INFORMATION	
Compatible? (RT#)	Y
PCBs (ppm) (Oily Waste Only)?	N/A
TOC ppm (CC Waste Only)?	
Flash Point (F)	87 > 140
pH (S.U.)	
Cyanides? (mg/L)	< 30
Sulfides? (ppm)?	< 200
Specific Gravity	1.02
Physical Description	Liquid
Stream Consistency	(Yes) No
Oil in Sample?	Yes (No)
Temperature (F)	68.3
Conductivity	36.3ms
% Solids	2.96
Turbidity	(Yes) No
Color	Brown
TSS (%)	< 0.1
Radiation Screen (as needed)	
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	10/26-2020
Receiving ID#	B10262002 STA. B10262502
Manifest #	Line 0002730
Land Ban Cert included	Yes No
EGT Approval #	01416
Generator	CFL
Client	
Transporter	KRD
Time in	09:14
Time out	10:10
Received by	J.H
Sampled by	BB

STA. B10262502

LAB INFORMATION	
Compatible? (RT#)	Y
PCBs (ppm) (Oily Waste Only)?	N/A
TOC ppm (CC Waste Only)?	
Flash Point (F)	8 > 140
pH (S.U.)	
Cyanides? (mg/L)	< 30
Sulfides? (ppm)?	< 200
Specific Gravity	1.02
Physical Description	Liquor
Stream Consistency	<input checked="" type="radio"/> Yes <input type="radio"/> No
Oil in Sample?	Yes <input type="radio"/> No <input checked="" type="radio"/>
Temperature (F)	64.6
Conductivity	36.1 mS
% Solids	2.40
Turbidity	<input checked="" type="radio"/> Yes <input type="radio"/> No
Color	Black
TSS (%)	0.25
Radiation Screen (as needed)	
Lab Signature/Initials	J.H

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	10/27-2020
Receiving ID#	B102720 03
Manifest #	Line 0002738
Land Ban Cert included	Yes No
EGT Approval #	01416
Generator	CFE
Client	
Transporter	KRD
Time in	10:15
Time out	11:10
Received by	J.H.
Sampled by	BB

LAB INFORMATION	
Compatible? (RT#)	Y
PCBs (ppm) (Oily Waste Only)?	N/A
TOC ppm (CC Waste Only)?	
Flash Point (F)	>140
pH (S.U.)	8
Cyanides? (mg/L)	<30
Sulfides? (ppm)?	<200
Specific Gravity	1.02
Physical Description	Liquid
Stream Consistency	<input checked="" type="radio"/> Yes <input type="radio"/> No
Oil in Sample?	Yes <input checked="" type="radio"/> No
Temperature (F)	62.9
Conductivity	35.9 mS
% Solids	3.57
Turbidity	<input checked="" type="radio"/> Yes <input type="radio"/> No
Color	Black
TSS (%)	1.0
Radiation Screen (as needed)	Neg
Lab Signature/Initials	J.H.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	10-28-20
Receiving ID#	B10282004
Manifest #	Line 0009011
Land Ban Cert included	Yes No
EGT Approval #	01415
Generator	CIC
Client	
Transporter	KRD
Time in	10:30
Time out	11:20
Received by	J.J.
Sampled by	AW

LAB INFORMATION	
Compatible? (RT#)	
PCBs (ppm) (Oily Waste Only)?	N/A
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 140
pH (S.U.)	8
Cyanides? (mg/L)	< 30
Sulfides? (ppm)?	< 200
Specific Gravity	1.01
Physical Description	Liquid
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	59.9
Conductivity	19.59 mS
% Solids	1.28
Turbidity	Yes No
Color	Black
TSS (%)	< 0.1
Radiation Screen (as needed)	Yes
Lab Signature/Initials	J.J.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	10/29-2020
Receiving ID#	B102920 03
Manifest #	Line 0009915
Land Ban Cert included	Yes No
EGT Approval #	01416
Generator	CFL
Client	
Transporter	KRD
Time in	11:34
Time out	12:55
Received by	J.H.
Sampled by	BB

LAB INFORMATION	
Compatible? (RT#)	Y
PCBs (ppm) (Oily Waste Only)?	N/A
TOC ppm (CC Waste Only)?	
Flash Point (F)	> 140
pH (S.U.)	8
Cyanides? (mg/L)	< 30
Sulfides? (ppm)?	< 200
Specific Gravity	1.02
Physical Description	1.75L
Stream Consistency	<input checked="" type="radio"/> Yes <input type="radio"/> No
Oil in Sample?	Yes <input type="radio"/> <input checked="" type="radio"/> No
Temperature (F)	68.7
Conductivity	35.2 mS
% Solids	2.10
Turbidity	<input checked="" type="radio"/> Yes <input type="radio"/> No
Color	Black
TSS (%)	< 0.1
Radiation Screen (as needed)	Neg.
Lab Signature/Initials	J.H.

WASTE PROFILES