



June 27, 2019

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 sixty-seventh 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 May, 2019 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 report satisfactory, however, if you have any questions or comments, please feel free to contact us.

Sincerely,

Richard J. Powals, P.E.
Vice President

cc: J. Frost (EGT)

att.

rjp062719/EGTEPAMonthlyReport-May, 2019

AVERAGE INJECTION RATE

Calculation of Average Injection Rate

CURRENT REPORTING YEAR 2019CURRENT REPORTING MONTH MAY

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	0	0	0
Since facility first injected			14,383,528
MI-163-1W-C011, Well #2-12			
Current Month	0	0	0
Since facility first injected			4,648,736
		Lifetime Combined	19,032,264

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 65

_____ lifetime number of months of injection × 43,830 minutes/month
= 2,848,950 minutes of injection

Lifetime combined injected volume 19,032,264 ÷ 2,848,950 minutes of injection
= 6.7 gpm average injection rate

WELL 1 DATA

WELL 01 Monthly Data

Date	Min Injection Pressure (PSIG)	Max Injection Pressure (PSIG)	Min Sight Glass Level (ft)	Max Sight Glass Level (ft)	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)
5/1/2019	125.1	125.7	21.3	21.5	833.4	833.9	13.6	13.6	0.0	0.0	708.0	708.6
5/2/2019	125.1	125.5	21.3	21.6	833.5	834.0	13.6	13.6	0.0	0.0	708.3	708.7
5/3/2019	125.2	125.4	21.3	21.5	833.5	833.8	13.6	13.6	0.0	0.0	708.2	708.6
5/4/2019	124.9	125.4	21.3	21.5	832.8	833.6	13.6	13.6	0.0	0.0	707.8	708.4
5/5/2019	124.6	125.4	21.3	21.7	832.3	833.4	13.6	13.6	0.0	0.0	707.5	708.2
5/6/2019	124.4	125.2	21.3	21.7	832.3	833.2	13.6	13.6	0.0	0.0	707.7	708.2
5/7/2019	124.7	125.0	21.3	21.6	832.4	833.0	13.6	13.6	0.0	0.0	707.6	708.3
5/8/2019	124.5	125.0	21.3	21.6	831.8	832.5	13.6	13.6	0.0	0.0	707.2	707.8
5/9/2019	124.3	125.0	21.3	21.7	831.6	832.3	13.6	13.6	0.0	0.0	707.0	707.5
5/10/2019	124.3	124.8	21.3	21.7	831.6	832.2	13.6	13.6	0.0	0.0	707.2	707.6
5/11/2019	124.4	124.8	21.3	21.6	831.2	832.0	13.6	13.6	0.0	0.0	706.7	707.4
5/12/2019	124.5	124.8	21.3	21.6	831.0	831.6	13.6	13.6	0.0	0.0	706.3	706.9
5/13/2019	124.5	124.8	21.3	21.5	830.7	831.2	13.6	13.6	0.0	0.0	706.0	706.5
5/14/2019	124.1	124.8	21.2	21.6	829.9	830.9	13.6	13.6	0.0	0.0	705.6	706.3
5/15/2019	123.9	124.6	21.3	21.7	829.8	830.7	13.6	13.6	0.0	0.0	705.7	706.3
5/16/2019	123.9	124.5	21.4	21.7	829.7	830.6	13.6	13.6	0.0	0.0	705.7	706.3
5/17/2019	123.9	124.3	21.4	21.7	829.9	830.3	13.6	13.6	0.0	0.0	705.8	706.2
5/18/2019	123.8	124.4	21.4	21.6	829.4	830.3	13.6	13.6	0.0	0.0	705.4	706.1
5/19/2019	123.7	124.4	21.4	21.7	829.1	829.9	13.6	13.6	0.0	0.0	705.2	705.8
5/20/2019	123.9	124.3	21.3	21.6	829.3	829.7	13.6	13.6	0.0	0.0	705.2	705.6
5/21/2019	123.7	124.3	21.3	21.7	828.6	829.4	13.6	13.6	0.0	0.0	704.7	705.4
5/22/2019	123.7	124.2	21.4	21.7	828.4	829.0	13.6	13.6	0.0	0.0	704.5	705.0
5/23/2019	123.4	124.1	21.4	21.7	828.0	828.8	13.6	13.6	0.0	0.0	704.4	704.9
5/24/2019	123.5	124.1	21.4	21.7	827.9	828.7	13.6	13.6	0.0	0.0	704.3	704.8
5/25/2019	123.1	124.0	21.4	21.7	827.4	828.4	13.6	13.6	0.0	0.0	704.0	704.6
5/26/2019	123.5	123.8	21.4	21.7	827.7	828.1	13.6	13.6	0.0	0.0	704.1	704.5
5/27/2019	123.3	124.0	21.3	21.7	827.0	828.0	13.6	13.6	0.0	0.0	703.6	704.3
5/28/2019	123.3	124.0	21.4	21.7	826.8	827.7	13.6	13.6	0.0	0.0	703.3	703.9
5/29/2019	123.5	123.9	21.4	21.7	826.8	827.4	13.6	13.6	0.0	0.0	703.2	703.8
5/30/2019	123.4	123.8	21.4	21.7	826.5	827.1	13.6	13.6	0.0	0.0	702.9	703.5
5/31/2019	123.1	123.9	21.4	21.7	825.9	826.8	13.6	13.6	0.0	0.0	702.6	703.2

Circle Chart Index

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

Chart Recorder #1

Channel #1

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

Channel #2

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

Channel #3

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

Channel #4

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

Chart Recorder #2

Channel #1

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

Channel #2

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

Channel #3

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

Channel #4

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

Chart Recorder #3

Channel #1

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

Channel #2

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

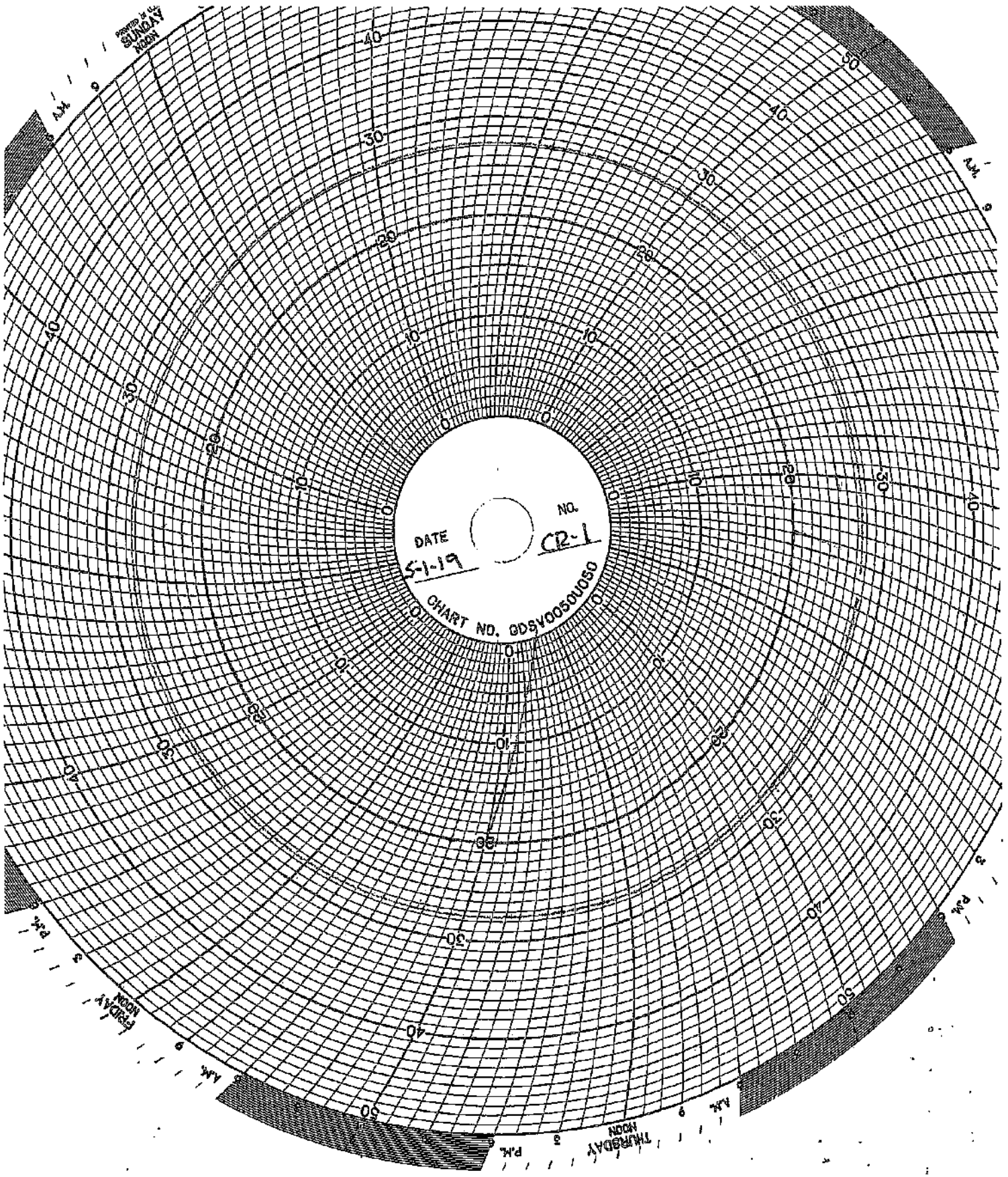
Channel #3

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

Channel #4

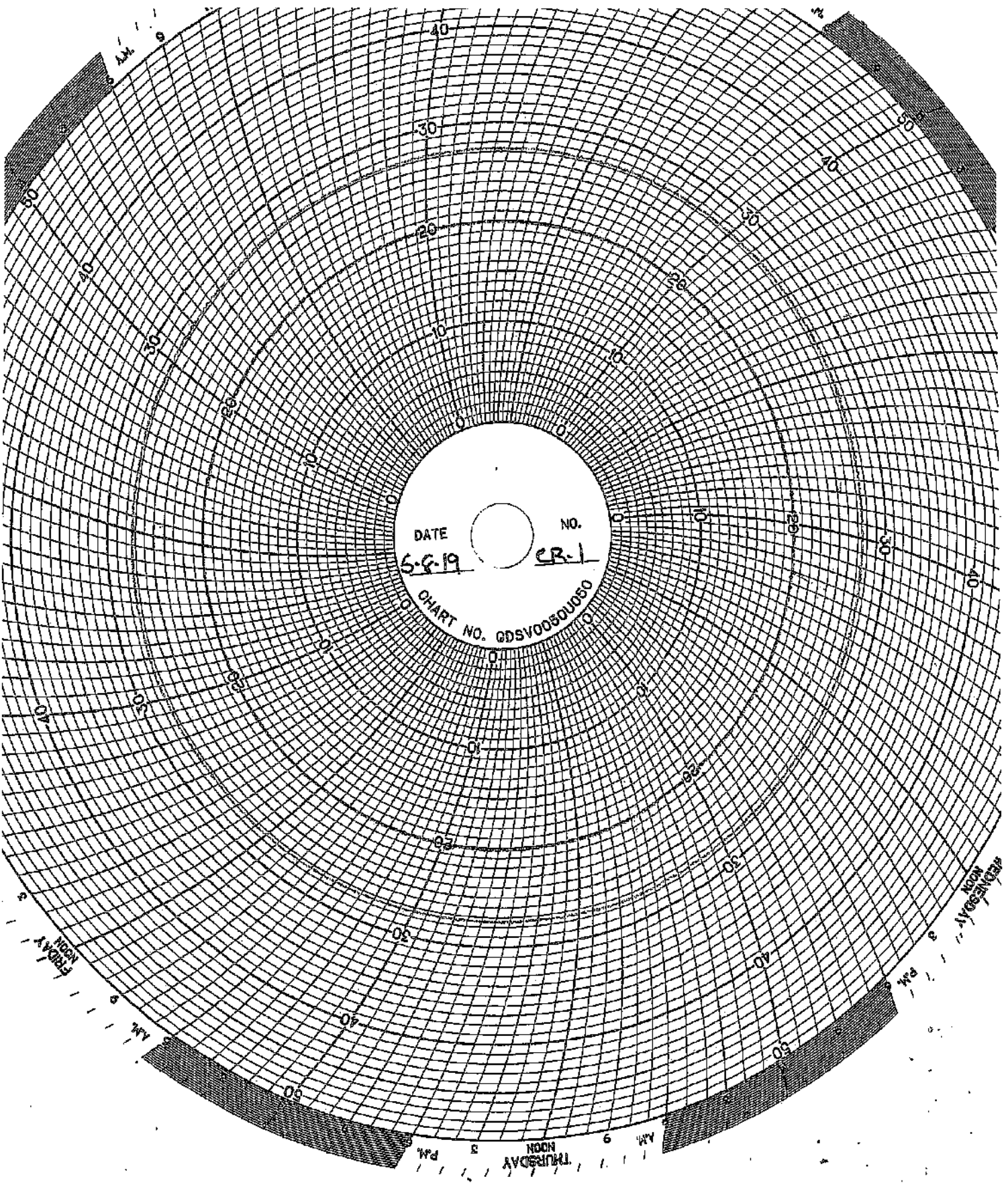
Black Pen - Temperature (chart value x 0)

PRINTED BY
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THURSDAY
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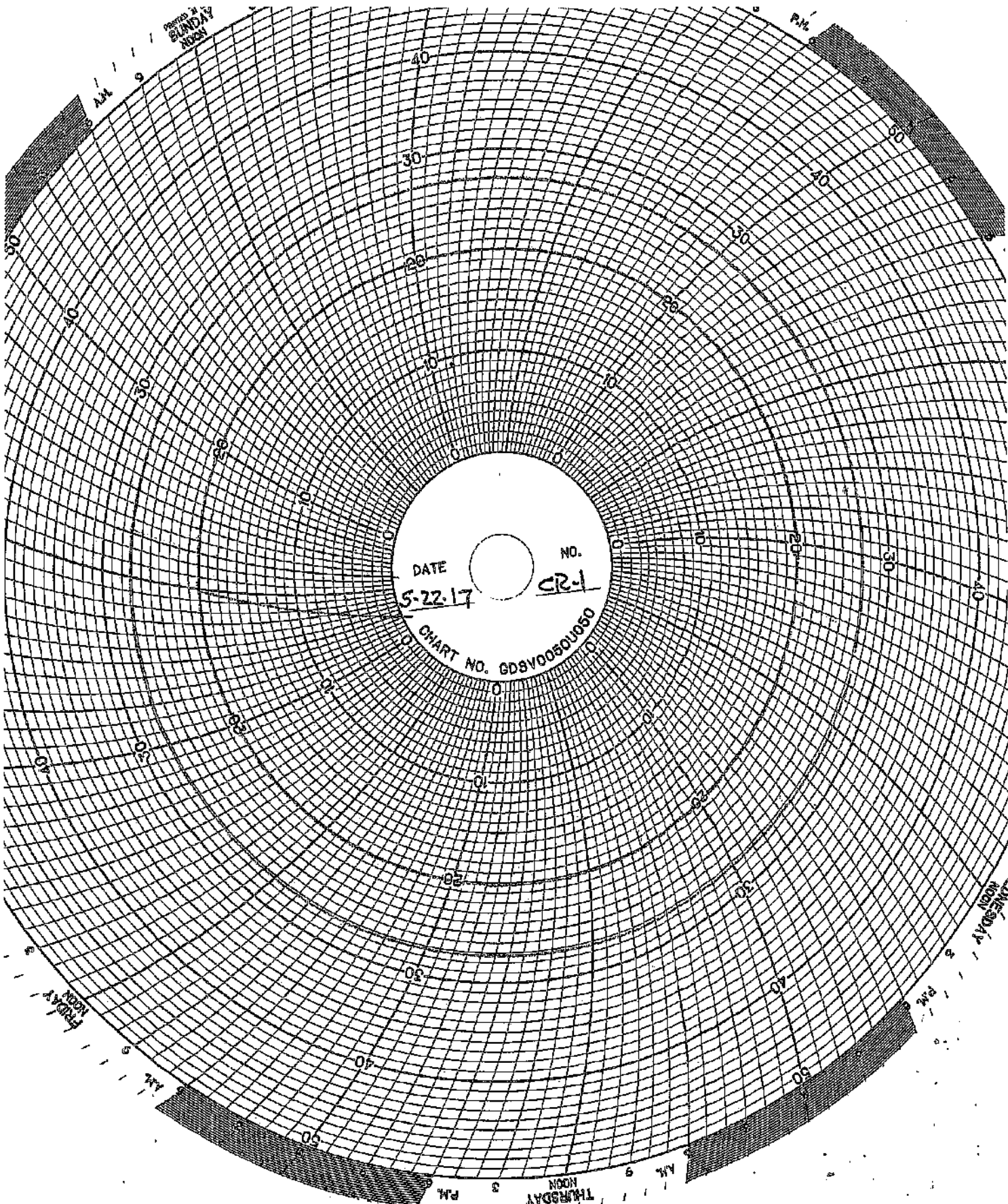


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FRIDAY 9 AM

THURSDAY 9 AM



FRIDAY
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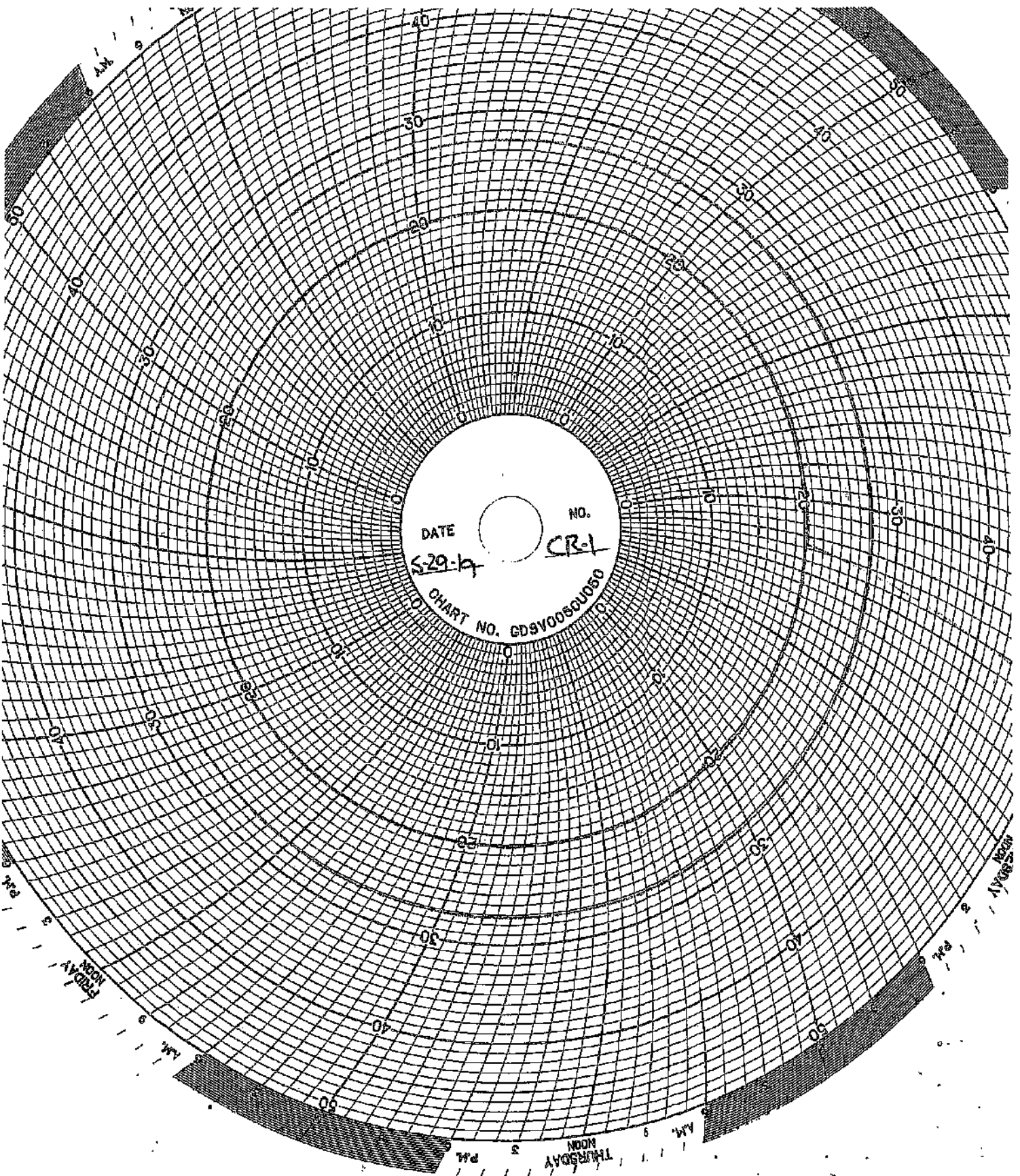
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FRIDAY
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DATE 5-29-67
NO. CR-1
CHART NO. GDSV0080U060

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WELL 2 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)
5/1/2019	125.1	125.7	21.3	21.5	833.4	833.9	13.6	13.6	0.0	0.0	708.0	708.6
5/2/2019	125.1	125.5	21.3	21.6	833.5	834.0	13.6	13.6	0.0	0.0	708.3	708.7
5/3/2019	125.2	125.4	21.3	21.5	833.5	833.8	13.6	13.6	0.0	0.0	708.2	708.6
5/4/2019	124.9	125.4	21.3	21.5	832.8	833.6	13.6	13.6	0.0	0.0	707.8	708.4
5/5/2019	124.6	125.4	21.3	21.7	832.3	833.4	13.6	13.6	0.0	0.0	707.5	708.2
5/6/2019	124.4	125.2	21.3	21.7	832.3	833.2	13.6	13.6	0.0	0.0	707.7	708.2
5/7/2019	124.7	125.0	21.3	21.6	832.4	833.0	13.6	13.6	0.0	0.0	707.6	708.3
5/8/2019	124.5	125.0	21.3	21.6	831.8	832.5	13.6	13.6	0.0	0.0	707.2	707.8
5/9/2019	124.3	125.0	21.3	21.7	831.6	832.3	13.6	13.6	0.0	0.0	707.0	707.5
5/10/2019	124.3	124.8	21.3	21.7	831.6	832.2	13.6	13.6	0.0	0.0	707.2	707.6
5/11/2019	124.4	124.8	21.3	21.6	831.2	832.0	13.6	13.6	0.0	0.0	706.7	707.4
5/12/2019	124.5	124.8	21.3	21.6	831.0	831.6	13.6	13.6	0.0	0.0	706.3	706.9
5/13/2019	124.5	124.8	21.3	21.5	830.7	831.2	13.6	13.6	0.0	0.0	706.0	706.5
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5/15/2019	123.9	124.6	21.3	21.7	829.8	830.7	13.6	13.6	0.0	0.0	705.7	706.3
5/16/2019	123.9	124.5	21.4	21.7	829.7	830.6	13.6	13.6	0.0	0.0	705.7	706.3
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5/18/2019	123.8	124.4	21.4	21.6	829.4	830.3	13.6	13.6	0.0	0.0	705.4	706.1
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5/20/2019	123.9	124.3	21.3	21.6	829.3	829.7	13.6	13.6	0.0	0.0	705.2	705.6
5/21/2019	123.7	124.3	21.3	21.7	828.6	829.4	13.6	13.6	0.0	0.0	704.7	705.4
5/22/2019	123.7	124.2	21.4	21.7	828.4	829.0	13.6	13.6	0.0	0.0	704.5	705.0
5/23/2019	123.4	124.1	21.4	21.7	828.0	828.8	13.6	13.6	0.0	0.0	704.4	704.9
5/24/2019	123.5	124.1	21.4	21.7	827.9	828.7	13.6	13.6	0.0	0.0	704.3	704.8
5/25/2019	123.1	124.0	21.4	21.7	827.4	828.4	13.6	13.6	0.0	0.0	704.0	704.6
5/26/2019	123.5	123.8	21.4	21.7	827.7	828.1	13.6	13.6	0.0	0.0	704.1	704.5
5/27/2019	123.3	124.0	21.3	21.7	827.0	828.0	13.6	13.6	0.0	0.0	703.6	704.3
5/28/2019	123.3	124.0	21.4	21.7	826.8	827.7	13.6	13.6	0.0	0.0	703.3	703.9
5/29/2019	123.5	123.9	21.4	21.7	826.8	827.4	13.6	13.6	0.0	0.0	703.2	703.8
5/30/2019	123.4	123.8	21.4	21.7	826.5	827.1	13.6	13.6	0.0	0.0	702.9	703.5
5/31/2019	123.1	123.9	21.4	21.7	825.9	826.8	13.6	13.6	0.0	0.0	702.6	703.2

Circle Chart Index

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

Chart Recorder #1

Channel #1

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

Channel #2

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

Channel #3

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

Channel #4

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

Chart Recorder #2

Channel #1

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

Channel #2

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

Channel #3

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

Channel #4

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

Chart Recorder #3

Channel #1

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

Channel #2

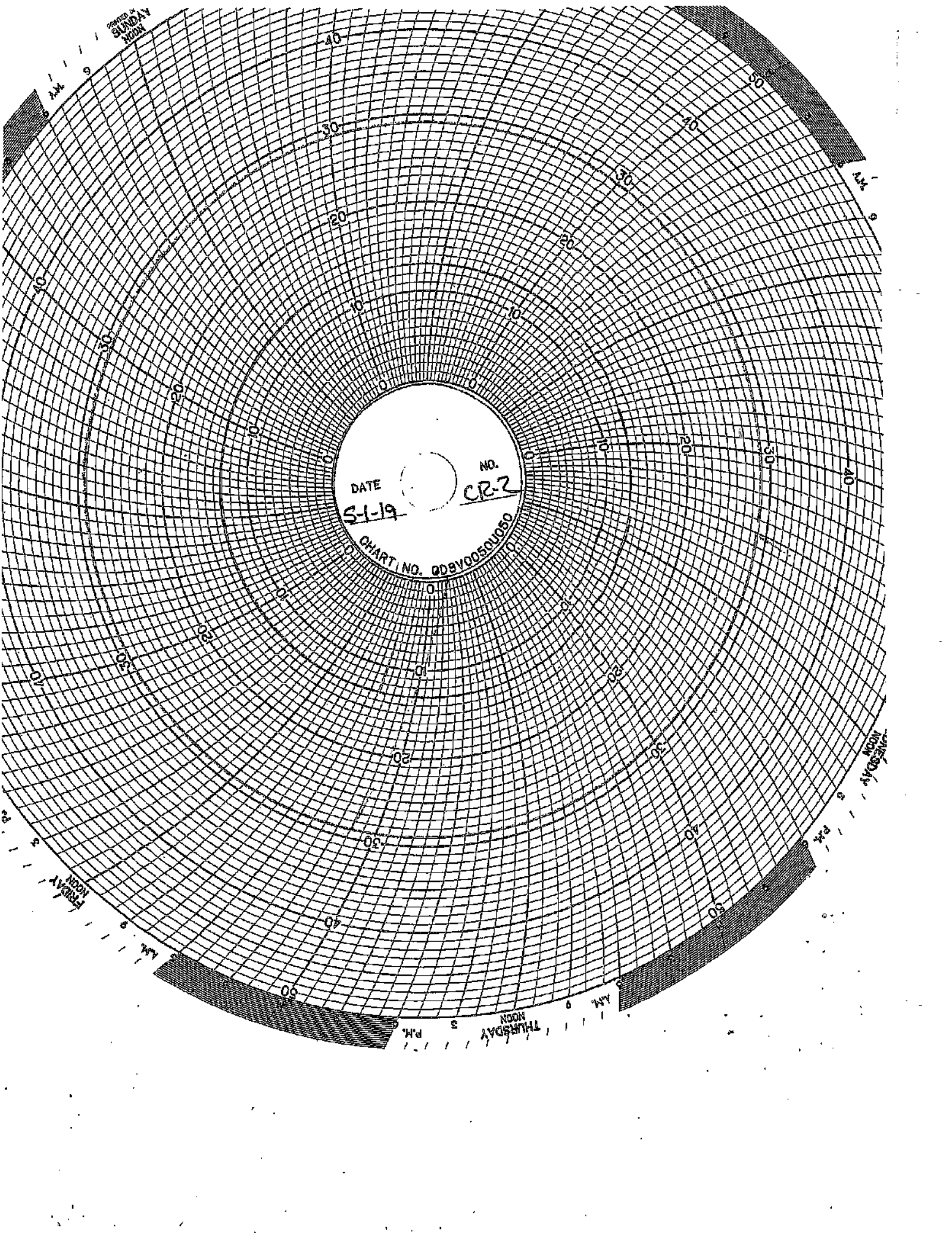
Red Pen - Well 1 Monthly Volume (chart value x 100,000)

Channel #3

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

Channel #4

Black Pen - Temperature (chart value x 0)



SUNDAY

MONDAY

TUESDAY

WEDNESDAY

THURSDAY

FRIDAY

DATE

5-1-19

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CR-2

CHART NO. 008V00501050

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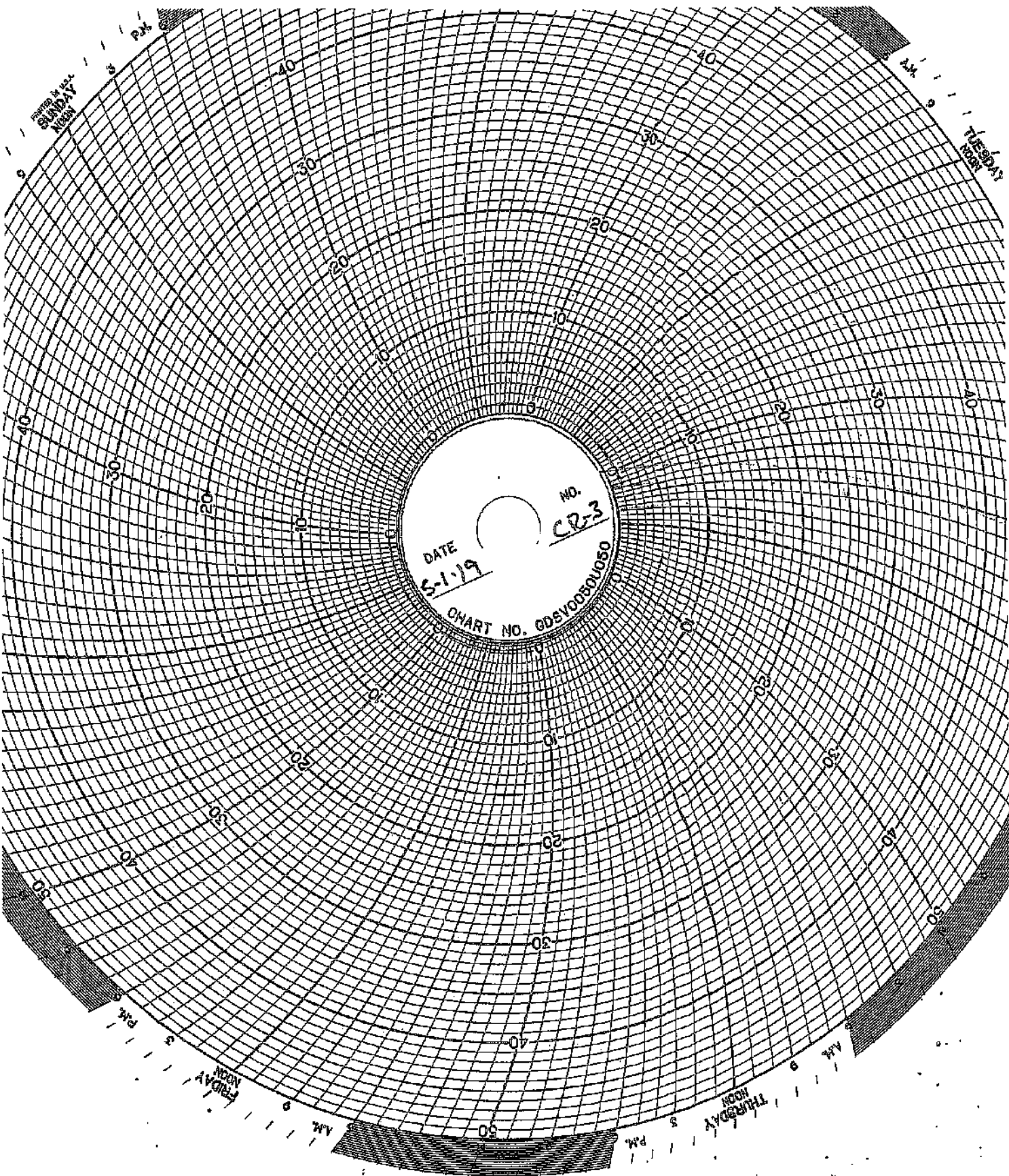
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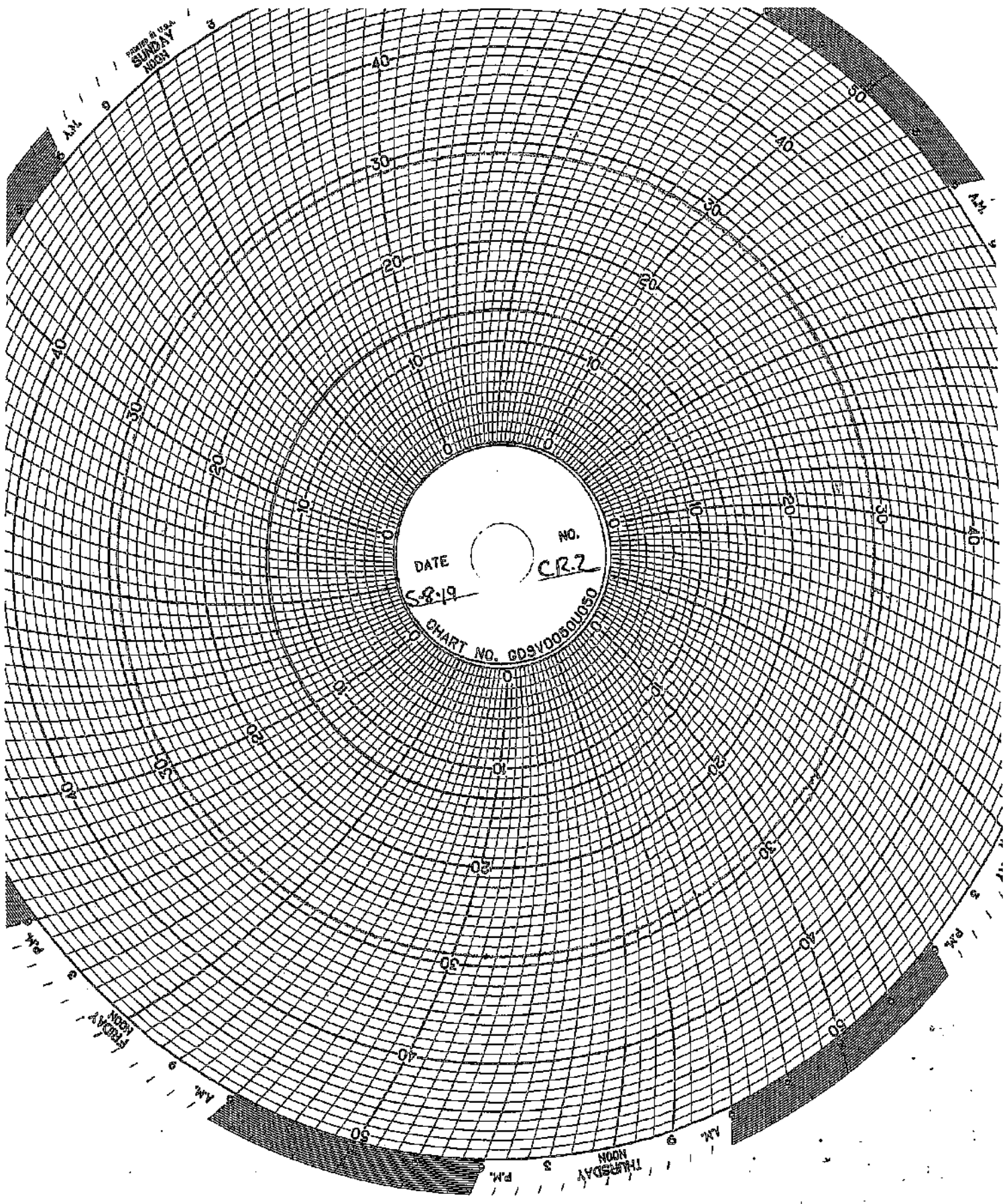


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CHART NO. 005V0050U050

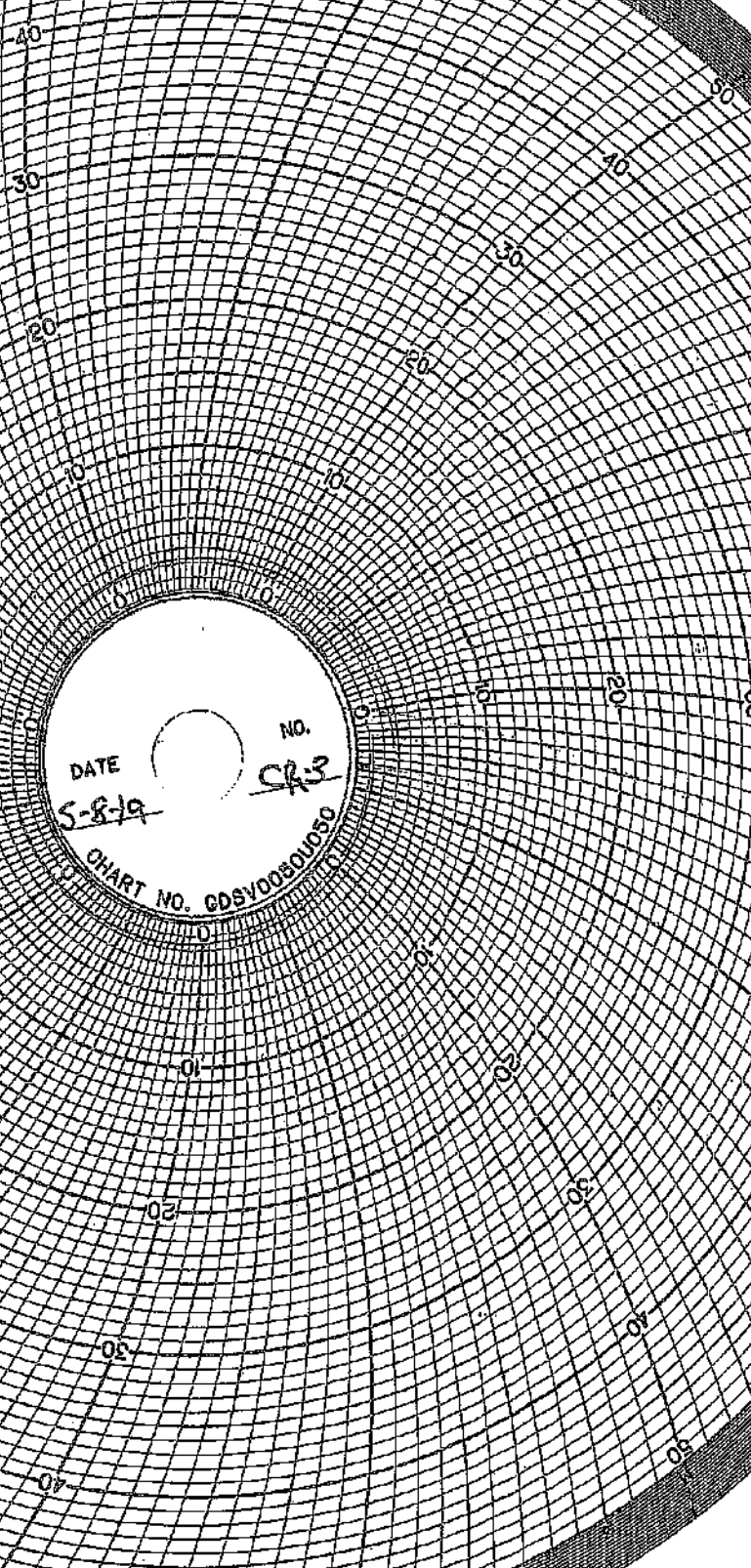
WINDS IN KNOTS
SUNDAY
NOON

DATE 5-8-19
NO. CR.2
CHART NO. GDSV0001050

THURSDAY
NOON



PRINTED IN U.S.A.
SUNDAY
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DATE 5-8-79 NO. CR-3

CHART NO. 005V00030U050

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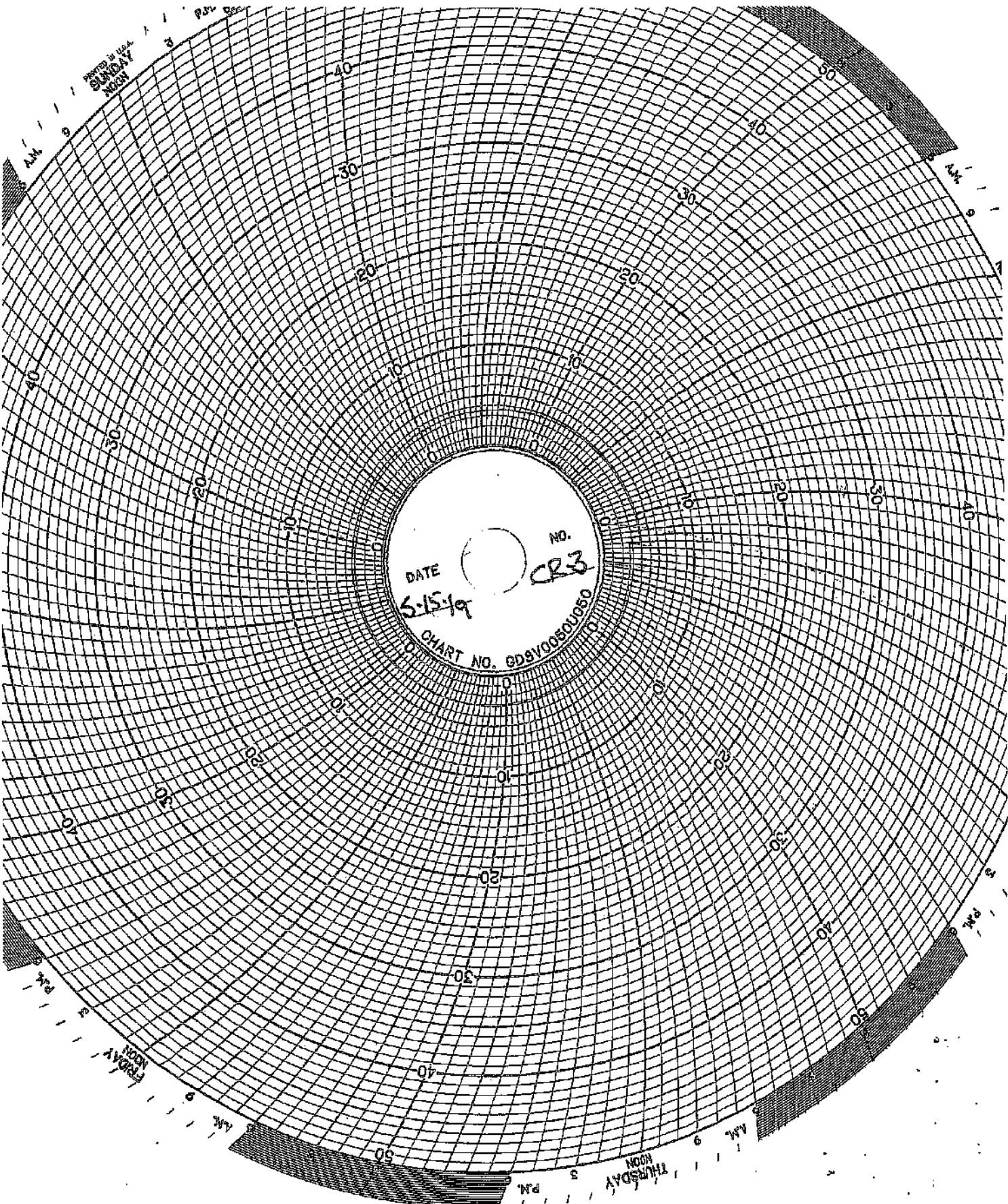
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DATE 5-15-49
NO. CR3
CHART NO. GDSV005050

PRINTED BY HALL
SUNDAY
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6 AM
9 AM

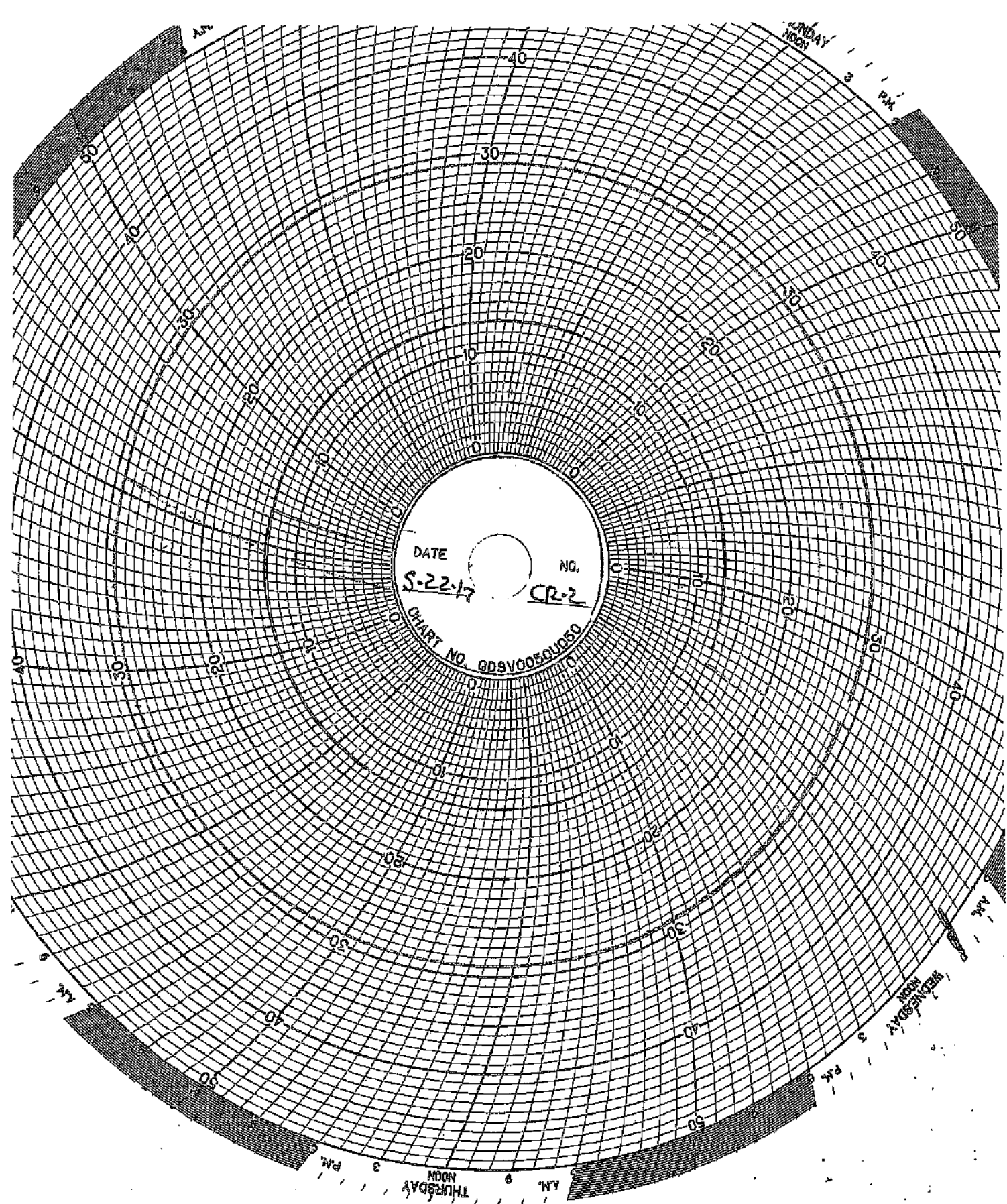
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3 PM
6 PM
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3 PM
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FRIDAY
MOON

THURSDAY
MOON



DATE
5-22-17

NO.
CR-2

CHART NO. GDSVCO501050

SUNDAY
NOON

3 PM

4 PM

THURSDAY
NOON

3 PM

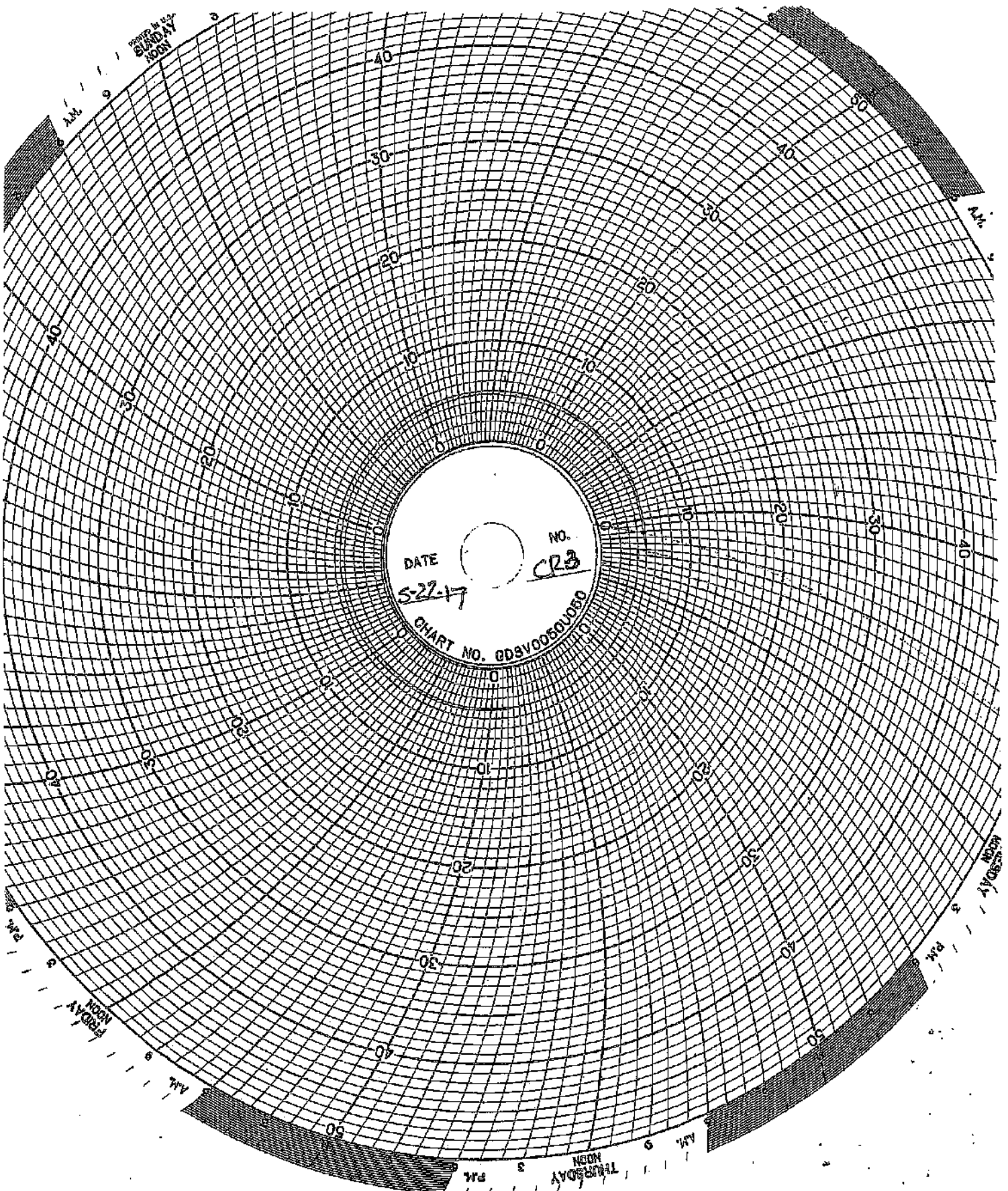
4 PM

THURSDAY
NOON

3 PM

4 PM

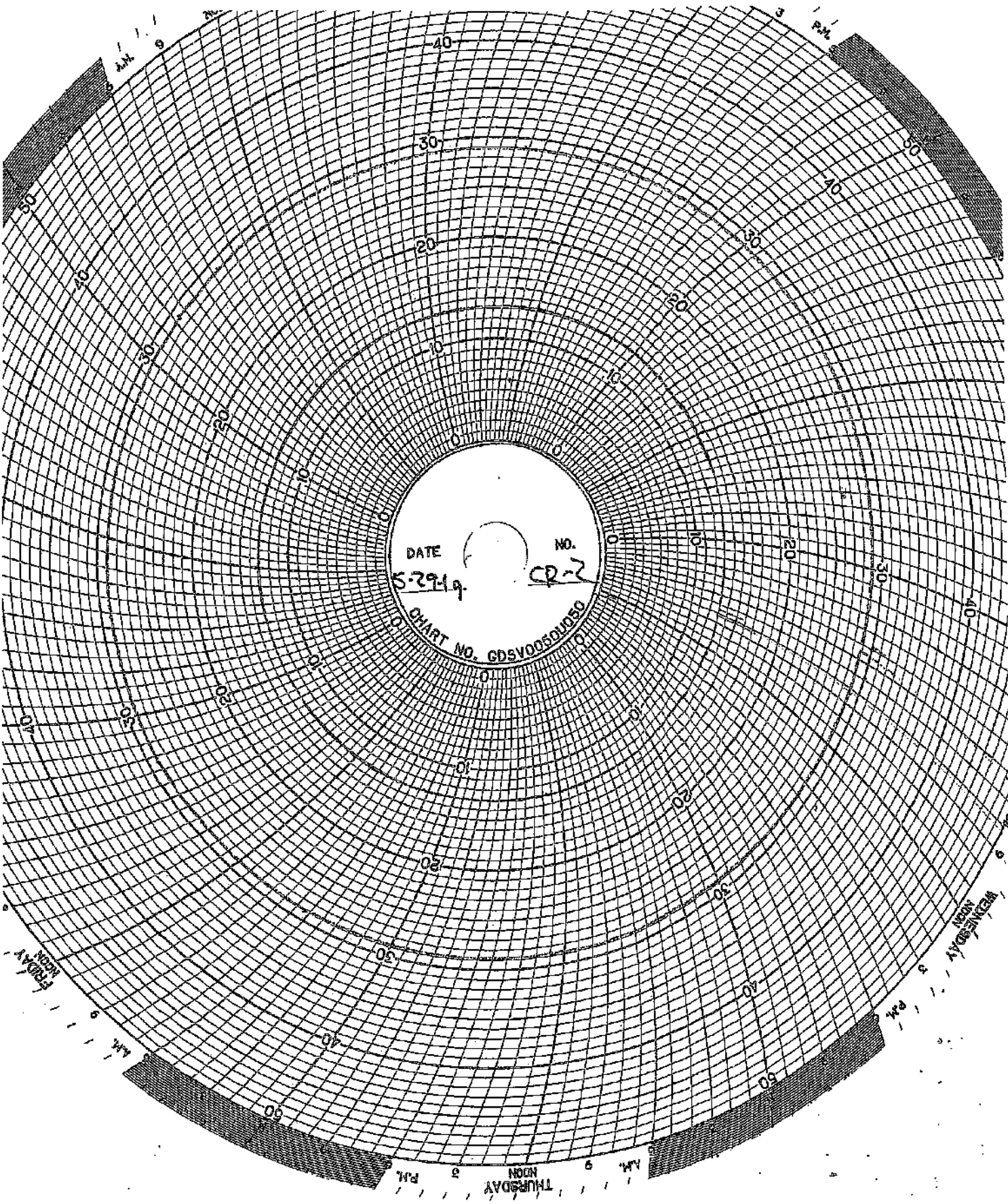
PRINTED IN U.S.A.
SUNDAY
NOON



DATE
5-22-17

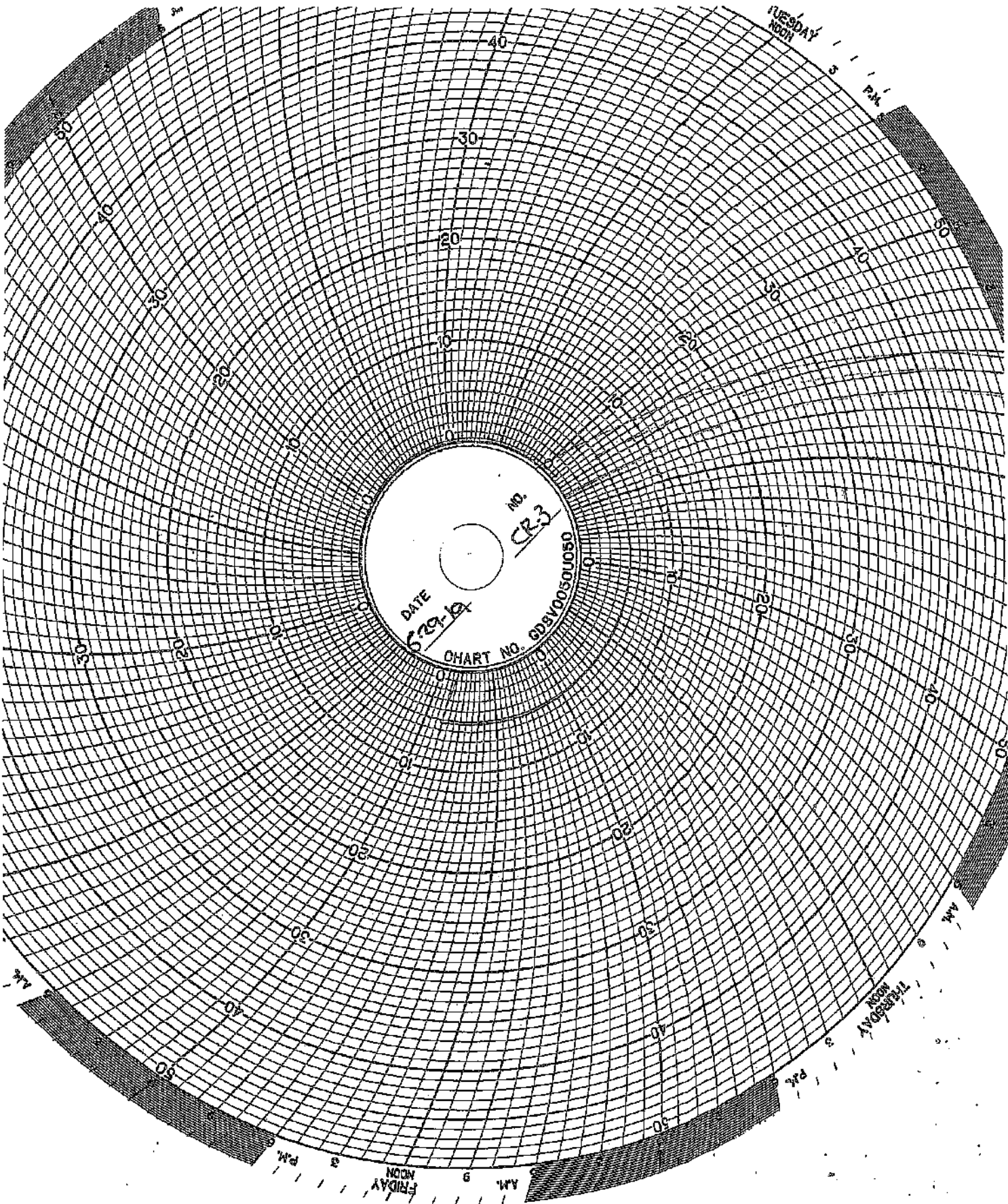
NO.
CR3

CHART NO. GDSV00501060



DATE 5-29-49 NO. CR-2
CHART NO. GDSV00501050

THURSDAY 9 AM
WEDNESDAY 9 AM
TUESDAY 9 AM
MONDAY 9 AM



DATE 6-29-64
NO. CR-3
CHART NO. 62810050050

TUESDAY
MON 3 1 1 PM

THURSDAY
MON 3 1 1 PM

FRIDAY
MON 3 1 1 PM

MAINTENANCE LOG

UIC Monthly Maintenance Log

No Maintenance This Month

CORROSION MONITORING

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.

CORROSION MONITORING COUPONS VISUAL DESCRIPTION

May, 2019

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

No change since last month.

GHESEQUIERE PLASTIC TESTING, INC.

20480 HARPER AVENUE
HARPER WOODS, MI 48225
PHONE (313) 885-3585
FAX (313) 885-1771

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

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

Attention: Mr. Don Anderson

WORK REQUESTED:

Perform Barcol Hardness test on sample submitted.

DESCRIPTION OF SAMPLE:

Sample submitted was identified as a fiberglass test coupon.

(P. O. #Credit Card).

WORK PERFORMED:

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

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

RESULTS:

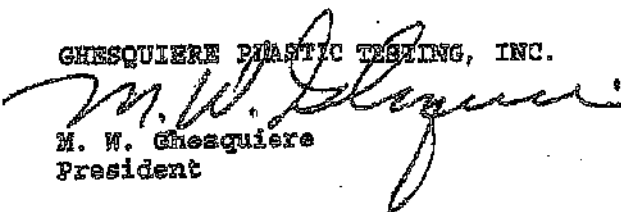
The following determination was made based upon the above test:

BARCOL HARDNESS

	<u>Hardness</u>
Specimen 1	90

Specimen is being returned with this report for further evaluation.

GHESEQUIERE PLASTIC TESTING, INC.


M. W. Ghesquiere
President

MTG/kni

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TOTAL 1 PAGES

GHSQUIERE PLASTIC TESTING, INC.

20450 HARPER AVENUE
HARPER WOODS, MI 48228
PHONE (313) 885-9535
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.

(E. 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:

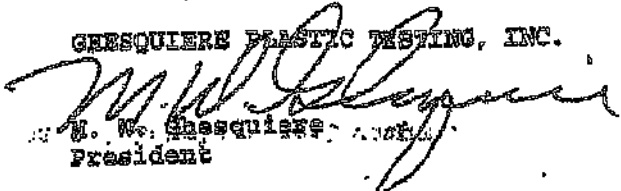
BARCOL HARDNESS

Hardness

Specimen ID: 90

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

GHSQUIERE PLASTIC TESTING, INC.


M. W. Ghesquiere, President

MWG/dm

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TOTAL 1 PAGES

Ghesquiere Plastic Testing, Inc.

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

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

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

Attention: Mr. Don Anderson

WORK REQUESTED:

Perform Barcol Hardness test on sample submitted.

DESCRIPTION OF SAMPLE:

Sample submitted was identified as a fiberglass test coupon.

(P. O. #Credit Card).

WORK PERFORMED:

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

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

RESULTS:

The following determination was made based upon the above test:

BARCOL HARDNESS

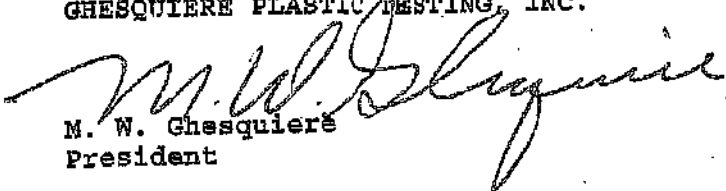
Hardness

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
Remulus, MI 48174

Prepared By:

Meissa 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

ISO 9001:2008
Registered

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W W W . A R D L . C O M

2887 Glichrist Rd. | Akron, Ohio 44305 | answers@ardl.com
Toll Free (800) 630-ARDL | Worldwide (330) 794-6600 | Fax (330) 794-6610



Testing. Development. Problem Solving.

October 2, 2014

John Frost
Environmental Geo-Technologies, LLC

Page 2 of 2
PN118325

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

RECEIVED: One small section identified as: Fiberglass Coupon.

BARCOL HARDNESS ASTM D 2583-13a

Results

Barcol Hardness, Instant

97

Prepared By:


Melissa Martin
Sr. Project Technician

Approved By:


Scott W. Yates
Plastics Testing Assistant Manager

www.ardl.com



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



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.

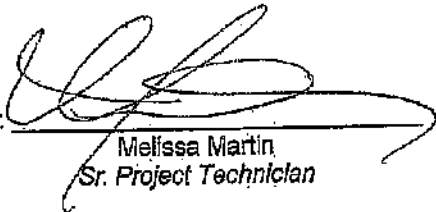
BARCOL HARDNESS ASTM D 2583-13a
Instant Reading

Results

Barcol Hardness, Instant

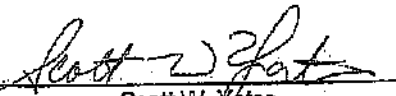
96

Prepared By:



Melissa Martin
Sr. Project Technician

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:

Malissa Martin
Senior Project Technician

Approved By:

Jim Drummond
Physical Testing, Manager

Rev 041916



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December 12, 2016

John Frost
Environmental Geo-Technologies, LLC

Page 2 of 2
PN 132862


SUBJECT: Barcol Hardness on one (1) material.

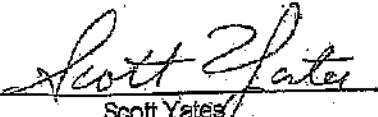
RECEIVED: One (1) small section identified as; Fiberglass Coupon.

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

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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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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.

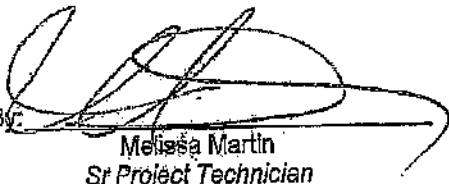
BARCOL HARDNESS ASTM D 2583-13a
Instant Reading

Results

Barcol Hardness, Instant

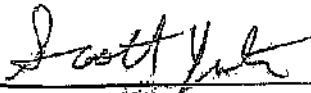
98

Prepared By:



Melissa Martin
Sr Project Technician

Approved By:



Scott Yates
Plastics Testing, Assistant Manager

50

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**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	New Fiberglass coupon
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	

**INJECTION
FINGERPRINTS**

**WASTE STREAMS
CHARACTERIZATIONS**