



Environmental GEO-Technologies, LLC

March 29, 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-fourth 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 February, 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.

cc: J. Frost (EGT)

att.

rjp032919/EGTEPAMonthlyReport-February, 2019

AVERAGE INJECTION RATE

Calculation of Average Injection Rate

CURRENT REPORTING YEAR 2019

CURRENT REPORTING MONTH FEBRUARY

Date (month, year) of the first injection into either well at the Cirin 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			14,330,505
MI-163-1W-C011, Well #2-12			
Current Month	0	0	0
Since facility first injected			4,648,736
		Lifetime Combined	18,979,241

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 62

 lifetime number of months of injection × 43,830 minutes/month
= 2,717,460 minutes of injection

Lifetime combined injected volume 18,979,241 ÷ 2,717,460 minutes of injection
= 7.0 gpm average injection rate

WELL 1 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

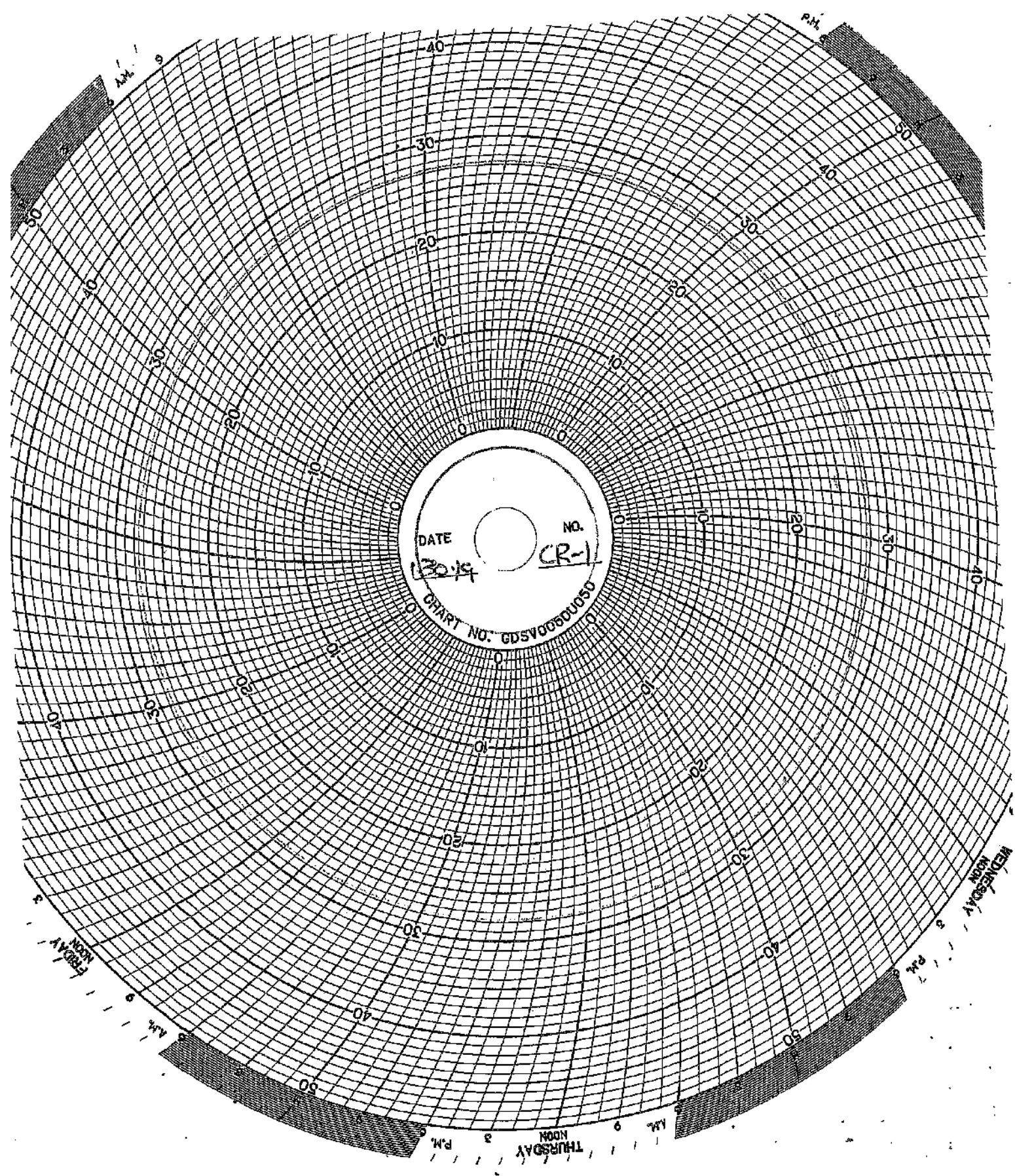
Red Pen - Well 1 Monthly Volume (chart value x 100,000)

Channel #3

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

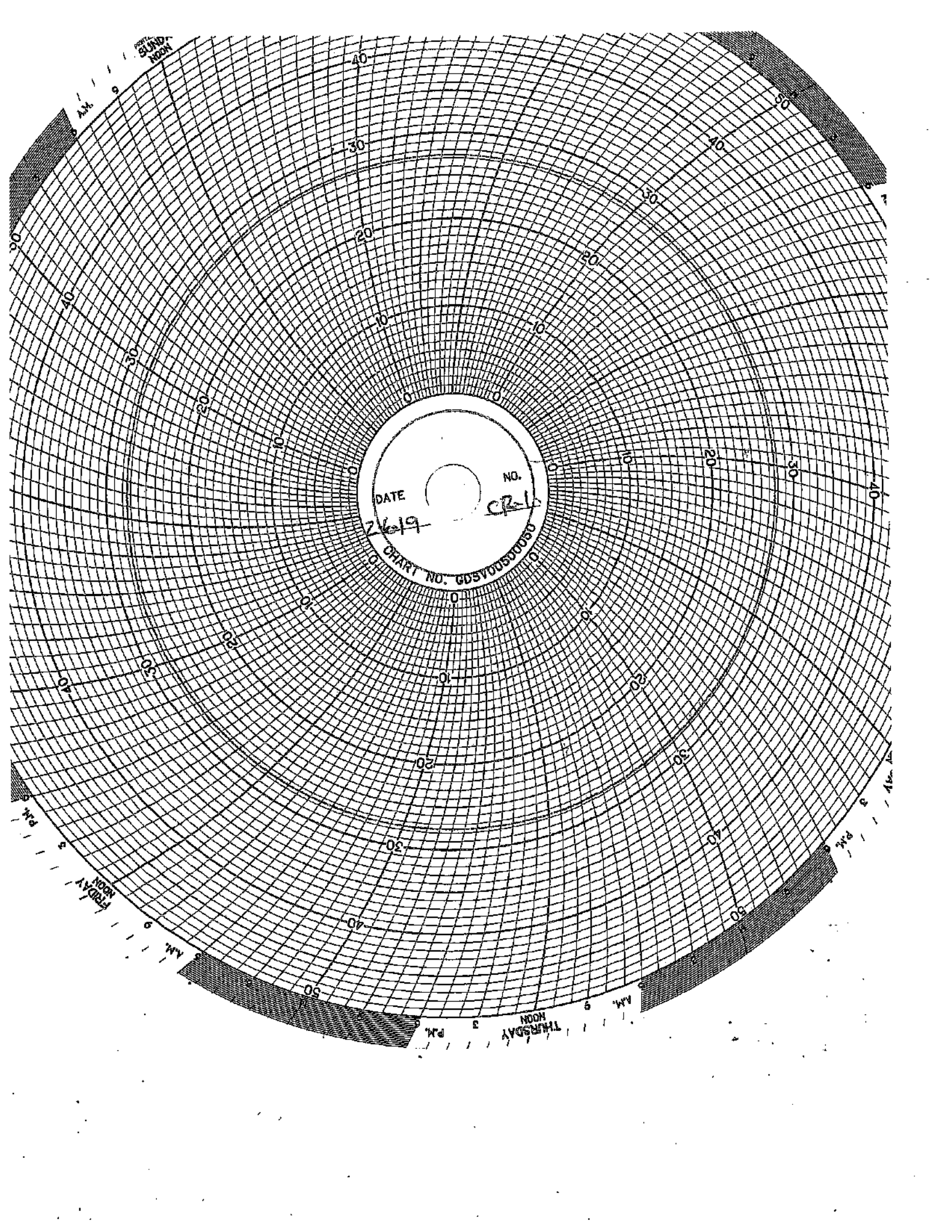
Channel #4

Black Pen - Temperature (chart value x 0)

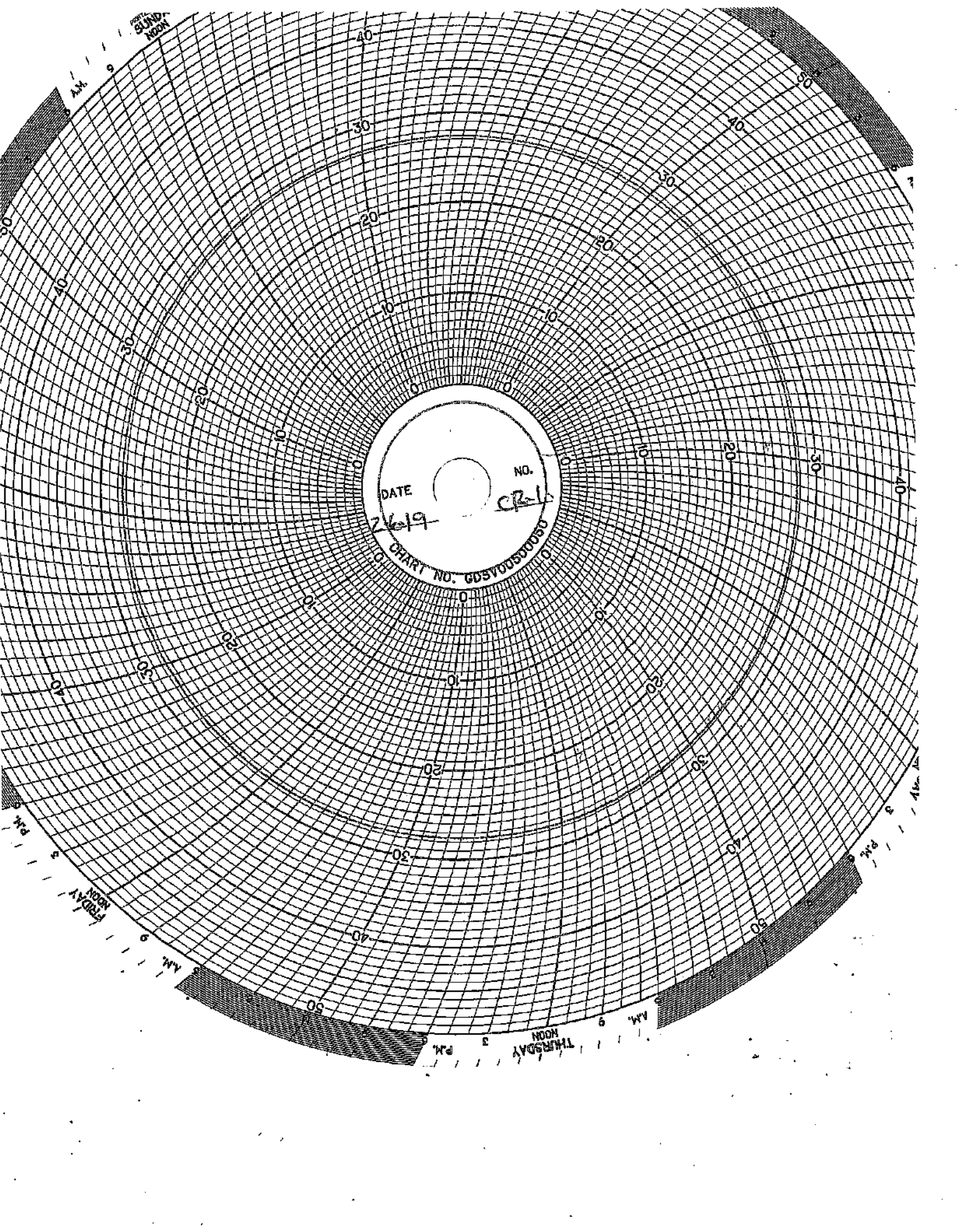


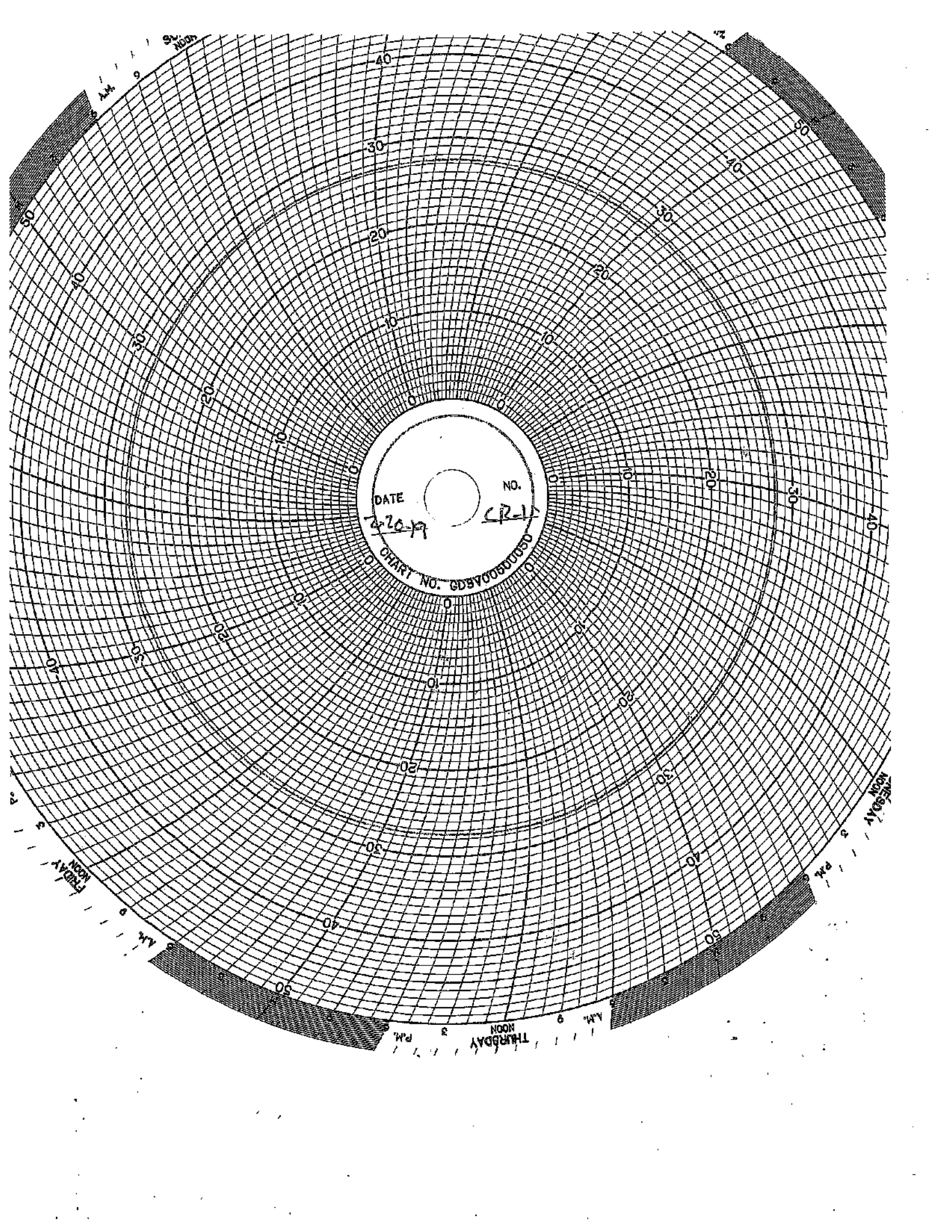
DATE 1/30/19 NO. CR-1
CHART NO. GDSV000000050

THURSDAY 9 AM 3 PM
WEDNESDAY 9 AM 3 PM



DATE 2/6/19
NO. CR-1
CHART NO. GDSY0000000





DATE 7-26-77 NO. CR-1
CHART NO. GDSV0000000000

THURSDAY 3 PM

FRIDAY 3 PM

SATURDAY 3 PM

SUNDAY 3 PM

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

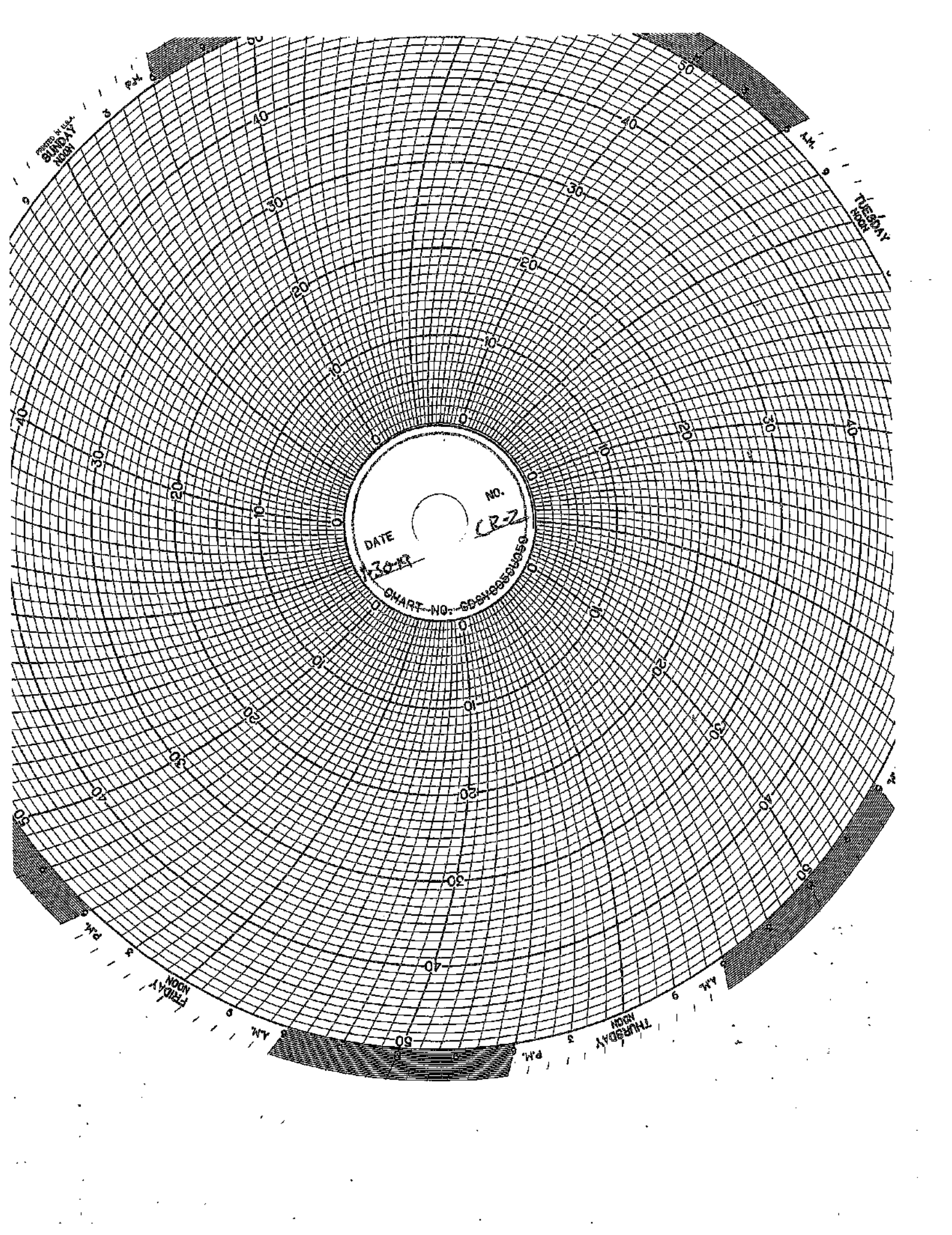
Red Pen - Well 1 Monthly Volume (chart value x 100,000)

Channel #3

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

Channel #4

Black Pen - Temperature (chart value x 0)



SUNDAY
NOON

THURSDAY
NOON

FRIDAY
NOON

THURSDAY
NOON

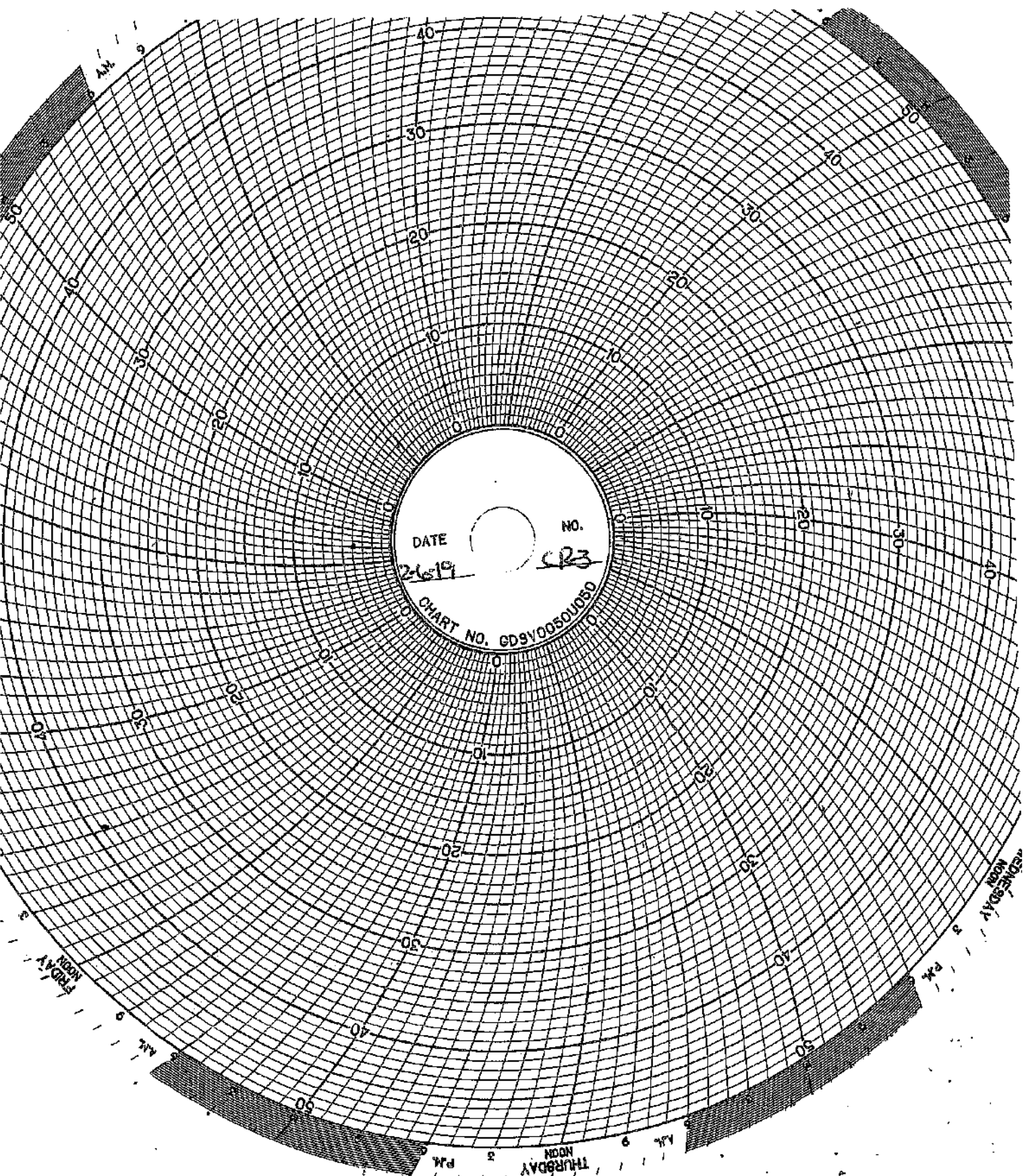
DATE

1-30-19

NO.

122

CHART NO. 68840558059



DATE 2-6-19
NO. CR3
CHART NO. GDSV00550050

40

30

20

10

0

0

0

10

20

30

40

50

30

40

50

0

10

20

30

40

50

0

10

20

30

40

THURSDAY

NOON

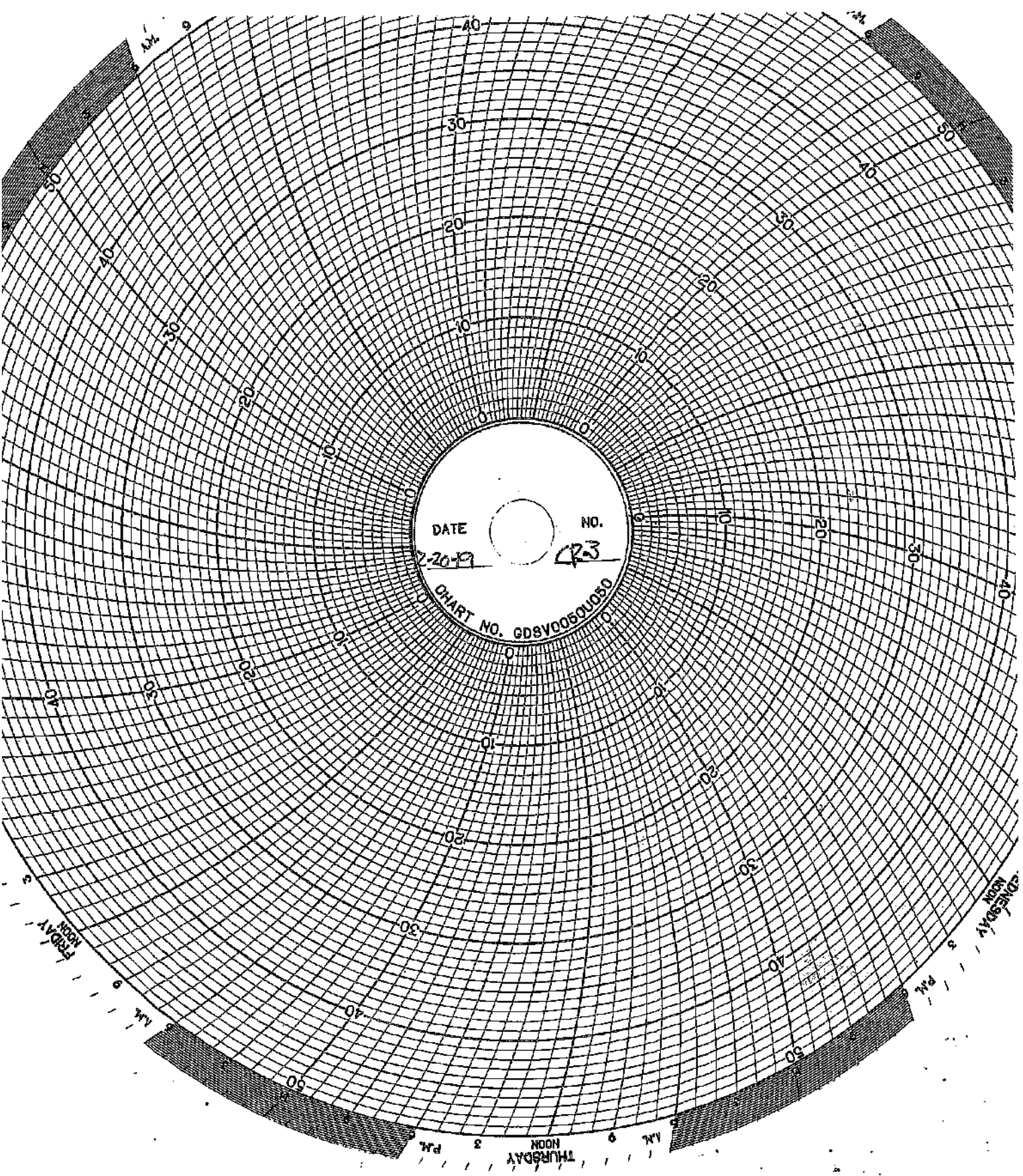
PM

MONDAY

TUESDAY

PM

PM



DATE 2-20-19 NO. CR-3
CHART NO. GDBV0060U080

MONDAY 9 AM
TUESDAY 3 PM
WEDNESDAY 9 AM
THURSDAY 3 PM
FRIDAY 9 AM
SATURDAY 3 PM
SUNDAY 9 AM

MAINTENANCE LOG

UIC Monthly Maintenance Log

No Maintenance This Month

CORROSION MONITORING

**CORROSION MONITORING PLAN
COUPON SUMMARY**

Date	Hastelloy (C267)	Stainless Steel (316L)	Fiberglass (Redbox)		
12/19/2013	13.330 g	10.848 g	7.309 g	Initial Mass @ start up	
2/21/2014	13.329 g	10.846 g	7.306 g		
3/10/2014	13.327 g	10.845 g	7.300 g		
4/18/2014	13.324 g	10.841 g	7.272 g		
5/30/2014	13.328 g	10.818 g	7.226 g		
6/30/2014	13.321 g	10.337 g	7.196 g		
7/11/2014	13.323 g	10.304 g	7.196 g		
8/12/2014	13.328 g	10.045 g	7.182 g		
9/17/2014	13.321 g	9.997 g	7.090 g		
10/30/2014	13.321 g	9.387 g	7.075 g		
11/21/2014	13.320 g	9.386 g	7.069 g		
12/19/2014	13.321 g	9.315 g	7.084 g		
1/12/2015	13.321 g	9.289 g	7.063 g		
2/23/2015	13.339 g	9.286 g	7.005 g		New hastelloy coupon
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	New stainless steel coupon	
5/31/2016	13.334 g	6.084 g	6.784 g		
6/30/2016	13.328 g	10.942 g	6.793 g		
8/3/2016	13.326 g	10.529 g	6.743 g		
8/29/2016	13.325 g	10.020 g	6.723 g		
10/27/2016	13.325 g	8.765 g	6.708 g		
11/29/2016	13.327 g	8.571 g	6.740 g		
12/12/2016	13.323 g	8.223 g	6.717 g		
1/3/2017	13.325 g	8.059 g	6.712 g		
2/28/2017	13.324 g	7.634 g	6.727 g		
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		New Fiberglass coupon
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	New stainless steel coupon
1/29/2018	13.326 g	10.930 g	18.027 g	
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	

CORROSION MONITORING COUPONS VISUAL DESCRIPTION

February, 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. No Injection this 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 appears to be no effect on this coupon. No injection this month.

Stainless Steel Coupon

No change since last month. No injection this month.

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) 865-8585
FAX (313) 885-1771

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

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

Attention: Mr. Don Anderson

WORK REQUESTED:

Perform Barcol Hardness test on sample submitted.

DESCRIPTION OF SAMPLE:

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

WORK PERFORMED:

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

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

RESULTS:

The following determination was made based upon the above test:

BARCOL HARDNESS

Hardness

Specimen 1	90
------------	----

Specimen is being returned with this report for further evaluation.

Ghesquiere Plastic Testing, Inc.


M. W. Ghesquiere
President

MWG/kni

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TOTAL 1 PAGES

Ghesquiere Plastic Testing, Inc.

20450 HARPER AVENUE
HARPER WOODS, MI 48226
PHONE (313) 885-8535
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

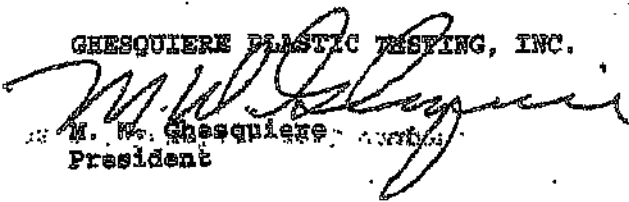
Hardness

Specimen ID: 90

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

DATE BY: [Signature]

Ghesquiere Plastic Testing, Inc.


M. W. Ghesquiere
President

MWG/dm

Ghesquiere Plastic Testing, Inc.

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

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

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

Attention: Mr. Don Anderson

WORK REQUESTED:

Perform Barcol Hardness test on sample submitted.

DESCRIPTION OF SAMPLE:

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

WORK PERFORMED:

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

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

RESULTS:

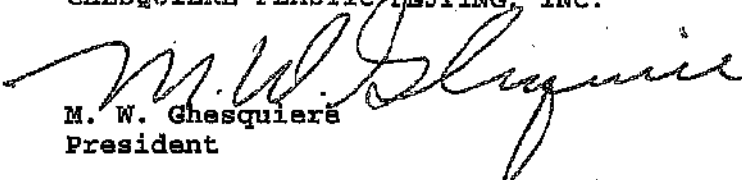
The following determination was made based upon the above test:

BARCOL HARDNESS

	<u>Hardness</u>
Specimen 1	85

Specimen was returned to the client June 16, 2014.

Ghesquiere Plastic Testing, Inc.


M. W. Ghesquiere
President

MWG/dm



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

[Signature]
Melissa Martin
Sr. Project Technician

Approved By

[Signature]
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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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 Goupon.

BARCOL HARDNESS ASTM D 2583-13a

Results

Barcol Hardness, Instant

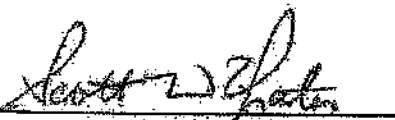
97

Prepared By:



Melissa Martin
Sr. Project Technician

Approved By:



Scott W. Yates
Plastics Testing Assistant Manager

ARCEL RUBBER DEVELOPMENT LABORATORY, INC.

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



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ISO 9001:2008 Registered

ISO 9001:2008
Registered

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www.ardl.com | 2887 Gilchrist Rd. | Akron, Ohio 44305 | answers@ardl.com | Toll Free (800) 830-ARDL
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

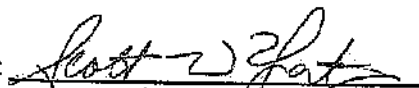
96

Prepared By:


Melissa Martin
Sr. Project Technician

to

Approved By:


Scott W. Yates
Plastics Testing Assistant Manager

December 12, 2016

TEST REPORT

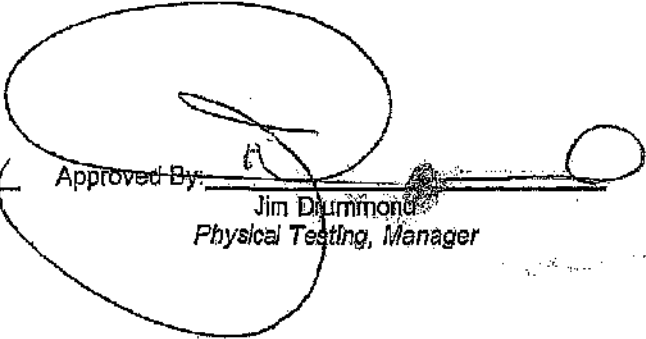
PN 132662
PO

PLASTICS TESTING DEPARTMENT

Prepared For:

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

Prepared By: 
Melissa Martin
Senior Project Technician

Approved By: 
Jim Duminond
Physical Testing, Manager

Rev 04/1916



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ISO 9001:2008 Registered

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 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 041816



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December 13, 2017

John Frost
Environmental Geo-Technologies, LLC

Page 2 of 2
PN 139140

SUBJECT: Barcol Hardness on one material.

RECEIVED: One small section identified as; Fiberglass Coupon.

BARCOL HARDNESS ASTM D 2583-13a
Instant Reading

Results

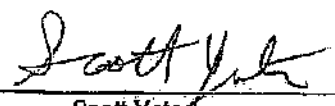
Barcol Hardness, Instant

96

Prepared By:


Melissa Martin
Sr Project Technician

Approved By:


Scott Yates
Plastics Testing, Assistant Manager

SC

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

**INJECTION
FINGERPRINTS**

**WASTE STREAMS
CHARACTERIZATIONS**