



**Environmental GEO-Technologies, LLC**

September 30, 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 seventieth 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 August, 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.

rjp093019/EGTEPAMonthlyReport-August, 2019

## **AVERAGE INJECTION RATE**

Calculation of Average Injection Rate

CURRENT REPORTING YEAR 2019

CURRENT REPORTING MONTH August

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
<b>MI-163-1W-C010 , Well #1-12</b>			
Current Month	8452	0	8,452
Since facility first injected			14,521,647
<b>MI-163-1W-C011, Well #2-12</b>			
Current Month	0	0	0
Since facility first injected			4,648,736
		Lifetime Combined	19,170,383

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 68

$$\underline{\hspace{2cm}} \text{ lifetime number of months of injection} \times 43,830 \text{ minutes/month} = \underline{2,980,440} \text{ minutes of injection}$$

$$\text{Lifetime combined injected volume } \underline{19,170,383} \div \underline{2,980,440} \text{ minutes of injection} = \underline{6.4} \text{ gpm average injection rate}$$

**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)
8/1/2019	-4.6	-2.4	21.0	21.2	893.7	895.6	7.4	7.4	0	0.0	896.8	899.6
8/2/2019	-4.4	-2.3	21.0	21.2	892.5	894.4	7.4	7.4	0	0.0	895.7	898.4
8/3/2019	-4.5	-2.5	21.0	21.2	891.3	893.3	7.4	7.4	0	0.0	894.3	897.4
8/4/2019	-4.8	-2.6	21.0	21.2	890.4	892.2	7.4	7.4	0	0.0	893.5	896.2
8/5/2019	-4.7	-2.8	21.0	21.2	889.5	891.1	7.4	7.4	0	0.0	892.5	895.1
8/6/2019	-4.8	-2.8	21.0	21.2	888.8	890.2	7.4	7.4	0	0.0	891.8	894.3
8/7/2019	-4.5	-2.6	21.0	21.2	887.3	889.0	7.4	7.4	0	0.0	890.5	893.2
8/8/2019	-4.6	-2.7	21.0	21.2	887.0	888.2	7.4	7.4	0	0.0	889.9	892.4
8/9/2019	-4.2	48.0	21.0	21.2	885.7	887.3	7.4	7.4	0	0.0	838.4	891.5
8/10/2019	47.6	115.6	21.0	21.2	884.7	886.4	7.4	7.4	0	0.0	769.4	838.8
8/11/2019	113.0	116.9	21.0	21.2	884.1	886.1	7.4	7.4	0	0.0	767.4	773.1
8/12/2019	107.3	116.4	21.0	21.2	883.8	885.2	7.4	7.4	0	0.0	767.6	776.7
8/13/2019	111.0	395.9	21.0	21.2	883.2	1013.3	7.4	7.4	0	43.9	608.3	773.5
8/14/2019	116.5	118.7	21.0	21.2	884.4	887.6	7.4	7.4	0	0.0	766.2	770.3
8/15/2019	116.0	118.4	21.0	21.2	882.8	884.6	7.4	7.4	0	0.0	764.9	767.6
8/16/2019	-3.9	486.5	21.0	21.2	847.6	1098.7	7.4	7.4	0	51.2	599.0	936.0
8/17/2019	117.1	120.1	21.0	21.2	885.1	897.2	7.4	7.4	0	0.0	766.8	778.3
8/18/2019	115.5	119.6	21.0	21.2	882.3	885.2	7.4	7.4	0	0.0	763.2	767.7
8/19/2019	55.4	119.3	20.2	23.8	220.4	1081.6	7.4	7.4	0	0.0	103.6	962.5
8/20/2019	115.3	117.8	22.1	22.3	639.6	641.0	7.4	7.4	0	0.0	522.0	525.4
8/21/2019	114.7	117.2	22.0	22.3	638.8	640.4	7.4	7.4	0	0.0	521.9	525.4
8/22/2019	115.2	117.3	22.0	22.3	638.7	639.9	7.4	7.4	0	0.0	521.7	524.6
8/23/2019	114.8	116.9	22.0	22.2	637.7	639.6	7.4	7.4	0	0.0	521.0	524.3
8/24/2019	114.5	116.5	22.0	22.2	637.0	638.9	7.4	7.4	0	0.0	520.8	524.0
8/25/2019	114.1	116.4	22.0	22.2	636.8	638.4	7.4	7.4	0	0.0	520.7	524.1
8/26/2019	114.1	115.9	22.0	22.2	636.6	637.8	7.4	7.4	0	0.0	520.9	523.4
8/27/2019	113.8	115.9	22.0	22.2	636.3	637.2	7.4	7.4	0	0.0	520.6	523.3
8/28/2019	113.4	115.4	22.0	22.2	635.6	637.1	7.4	7.4	0	0.0	520.3	523.4
8/29/2019	113.2	115.2	22.0	22.2	635.7	636.7	7.4	7.4	0	0.0	520.6	523.2
8/30/2019	113.0	115.1	22.0	22.2	634.9	636.2	7.4	7.4	0	0.0	519.9	523.0
8/31/2019	113.1	115.2	22.0	22.3	634.2	635.9	7.4	7.4	0	0.0	519.4	522.6

## 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)

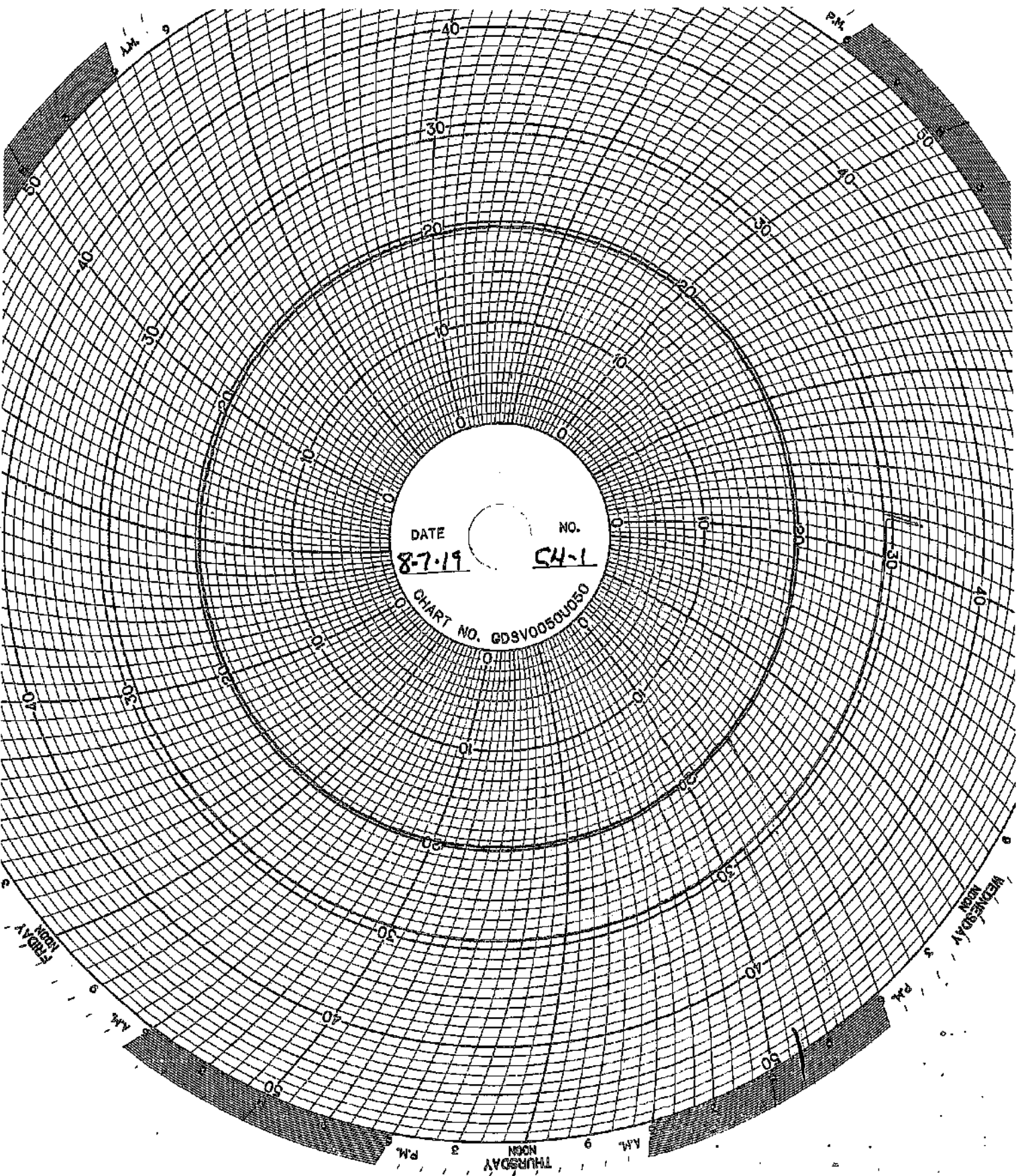
Channel #3

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

Channel #4

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





DATE 8-7-19 NO. 54-1

CHART NO. GDSV0050U050

THURSDAY

WEDNESDAY

FRIDAY

PM 3

AM 9

PM 3

50

40

30

20

10

0

0

10

20

30

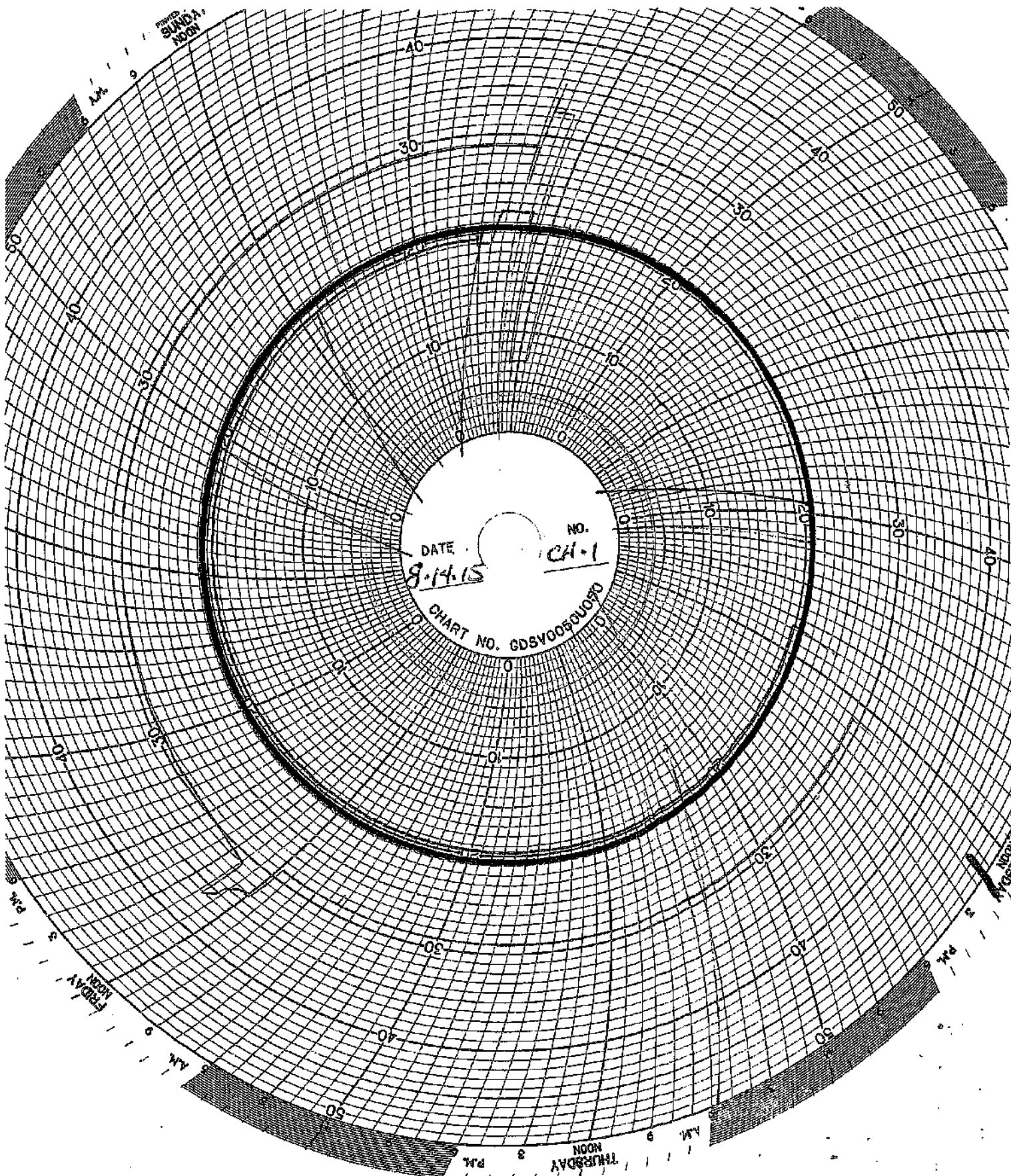
40

AM 9

PM 9



PRINTED  
SUNDAY  
NOON



DATE 8-14-15  
NO. CH-1  
CHART NO. GDSV0050090

9 AM 3 PM 9 AM 3 PM 9 AM 3 PM 9 AM 3 PM

## 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)
8/1/2019	0	0	29.5	29.6	0	0	7.4	7.4	0	0	0	0
8/2/2019	0	0	29.5	29.6	0	0	7.4	7.4	0	0	0	0
8/3/2019	0	0	29.4	29.8	0	0	7.4	7.4	0	0	0	0
8/4/2019	0	0	29.4	29.9	0	0	7.4	7.4	0	0	0	0
8/5/2019	0	0	29.3	29.9	0	0	7.4	7.4	0	0	0	0
8/6/2019	0	0	29.6	29.7	0	0	7.4	7.4	0	0	0	0
8/7/2019	0	0	29.4	29.9	0	0	7.4	7.4	0	0	0	0
8/8/2019	0	0	29.4	29.8	0	0	7.4	7.4	0	0	0	0
8/9/2019	0	0	29.3	29.8	0	0	7.4	7.4	0	0	0	0
8/10/2019	0	0	29.3	29.8	0	0	7.4	7.4	0	0	0	0
8/11/2019	0	0	29.3	29.9	0	0	7.4	7.4	0	0	0	0
8/12/2019	0	0	29.4	29.9	0	0	7.4	7.4	0	0	0	0
8/13/2019	0	0	29.5	29.6	0	0	7.4	7.4	0	0	0	0
8/14/2019	0	0	29.3	29.8	0	0	7.4	7.4	0	0	0	0
8/15/2019	0	0	29.5	29.6	0	0	7.4	7.4	0	0	0	0
8/16/2019	0	0	29.5	29.6	0	0	7.4	7.4	0	0	0	0
8/17/2019	0	0	29.4	29.8	0	0	7.4	7.4	0	0	0	0
8/18/2019	0	0	29.3	29.9	0	0	7.4	7.4	0	0	0	0
8/19/2019	0	0	29.3	29.8	0	0	7.4	7.4	0	0	0	0
8/20/2019	0	0	29.3	29.8	0	0	7.4	7.4	0	0	0	0
8/21/2019	0	0	29.3	29.8	0	0	7.4	7.4	0	0	0	0
8/22/2019	0	0	29.4	29.6	0	0	7.4	7.4	0	0	0	0
8/23/2019	0	0	29.4	29.5	0	0	7.4	7.4	0	0	0	0
8/24/2019	0	0	29.2	29.7	0	0	7.4	7.4	0	0	0	0
8/25/2019	0	0	29.1	29.7	0	0	7.4	7.4	0	0	0	0
8/26/2019	0	0	29.3	29.5	0	0	7.4	7.4	0	0	0	0
8/27/2019	0	0	29.4	29.5	0	0	7.4	7.4	0	0	0	0
8/28/2019	0	0	29.3	29.5	0	0	7.4	7.4	0	0	0	0
8/29/2019	0	0	29.3	29.5	0	0	7.4	7.4	0	0	0	0
8/30/2019	0	0	29.4	29.5	0	0	7.4	7.4	0	0	0	0
8/31/2019	0	0	29.1	29.6	0	0	7.4	7.4	0	0	0	0

## 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

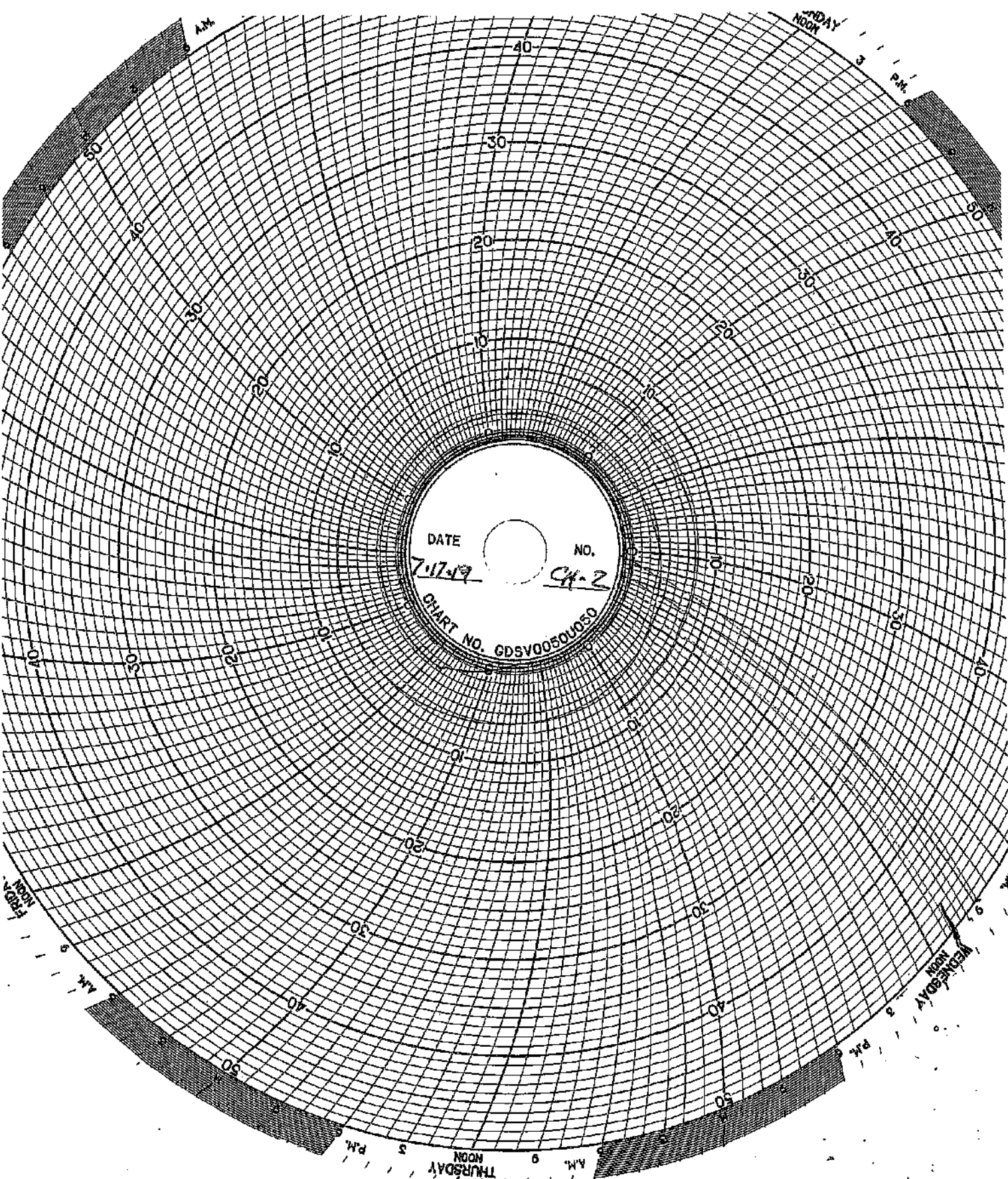
**Red Pen** - Well 1 Monthly Volume (chart value x 100,000)

Channel #3

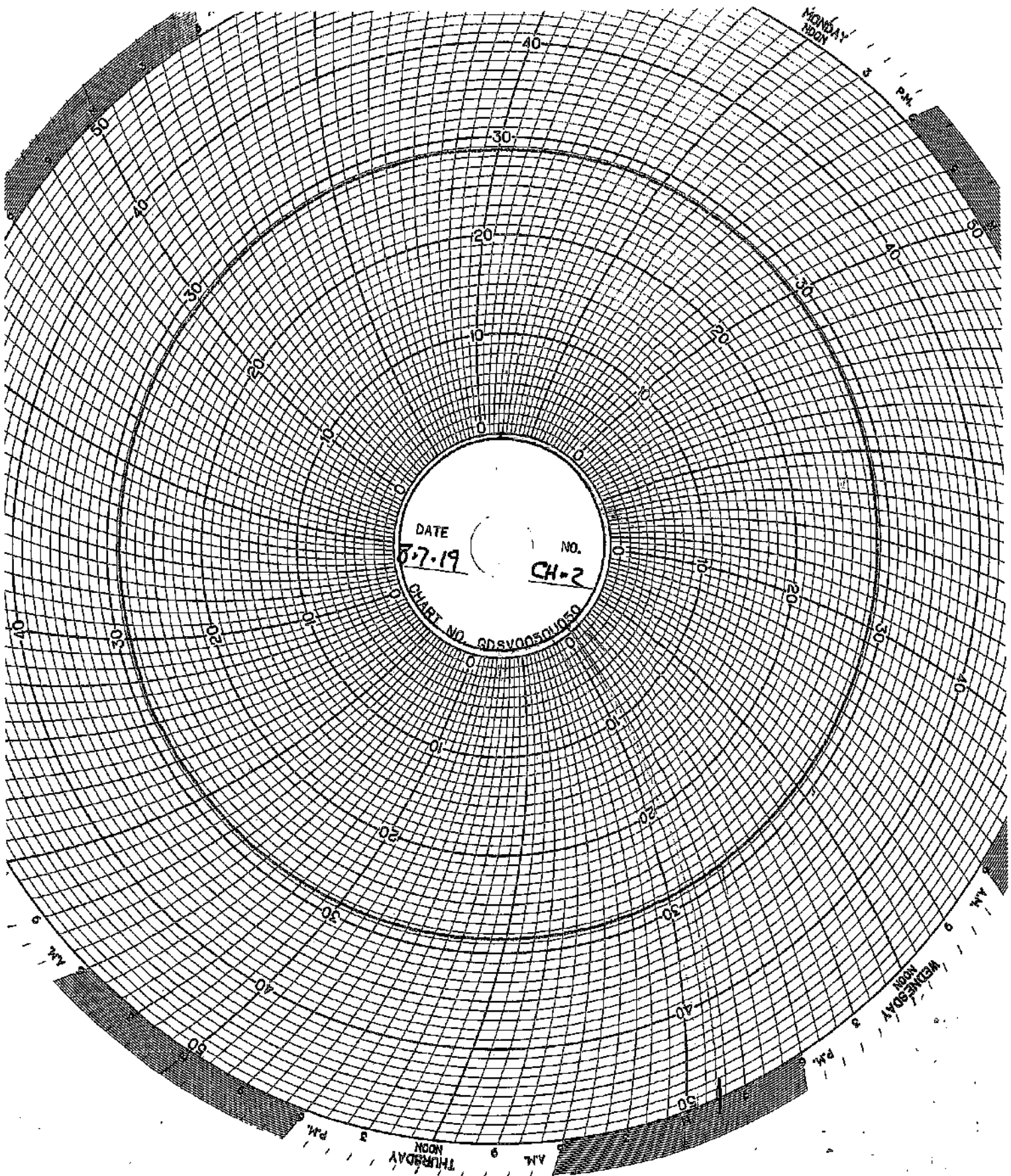
**Green Pen** - Well 2 Monthly Volume (chart value x 100,000)

Channel #4

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



DATE 7-17-49 NO. CH-2  
CHART NO. GDSV0050U050



DATE 8-7-19 NO. CH-2  
CHART NO. GDSV00501050

MONDAY  
NOON 3 PM

WEDNESDAY  
NOON 3 PM

THURSDAY  
NOON 3 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

9 PM

9 AM

9 AM

9 PM

9 PM

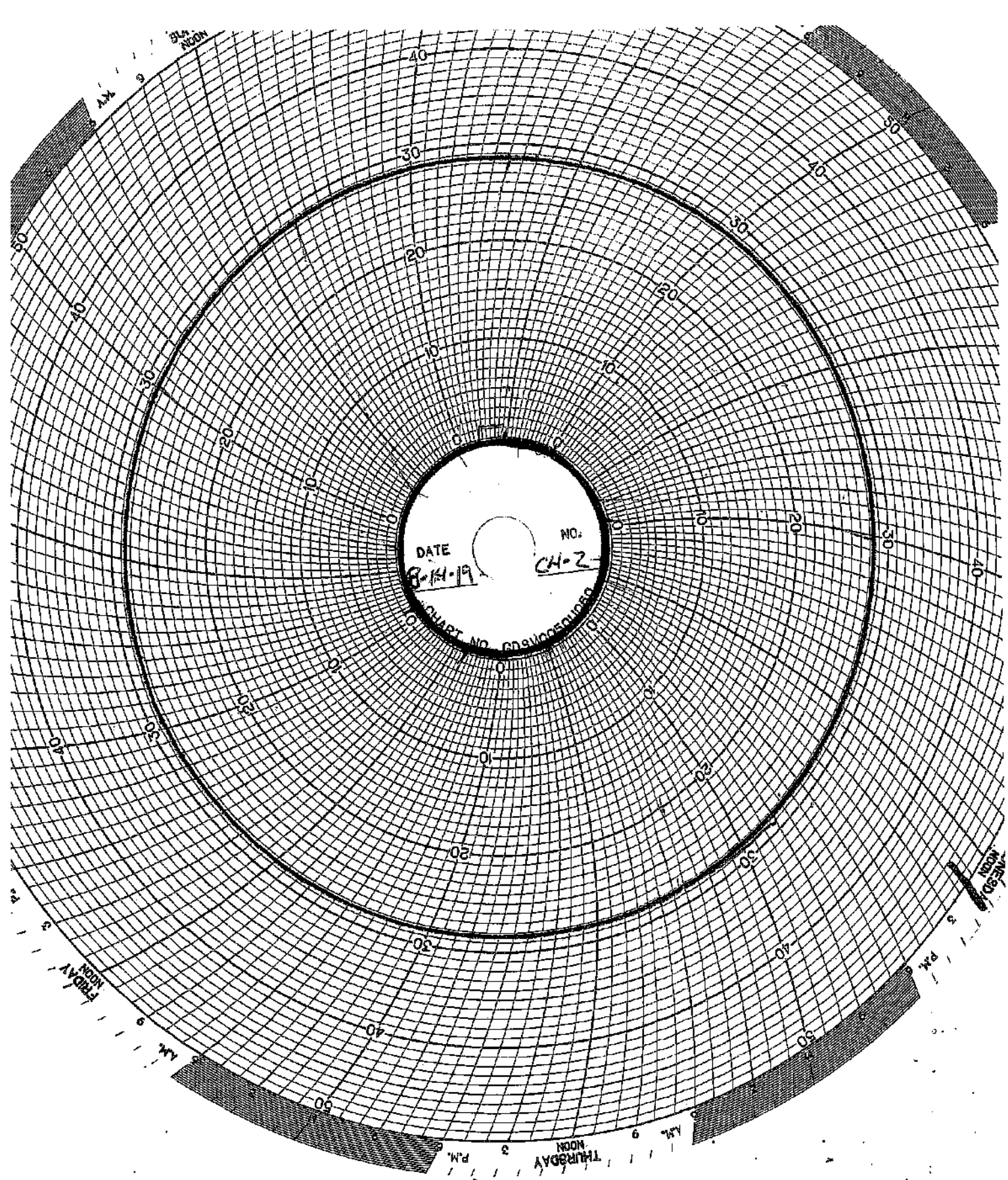
9 PM

9 AM

9 AM

9 PM

9 PM



DATE

8-14-19

NO.

CH-2

CONTRACT NO. GDSN00000000

THURSDAY

3 P.M.

NOON

9 A.M.

WEDNESDAY

NOON

3 P.M.

50

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

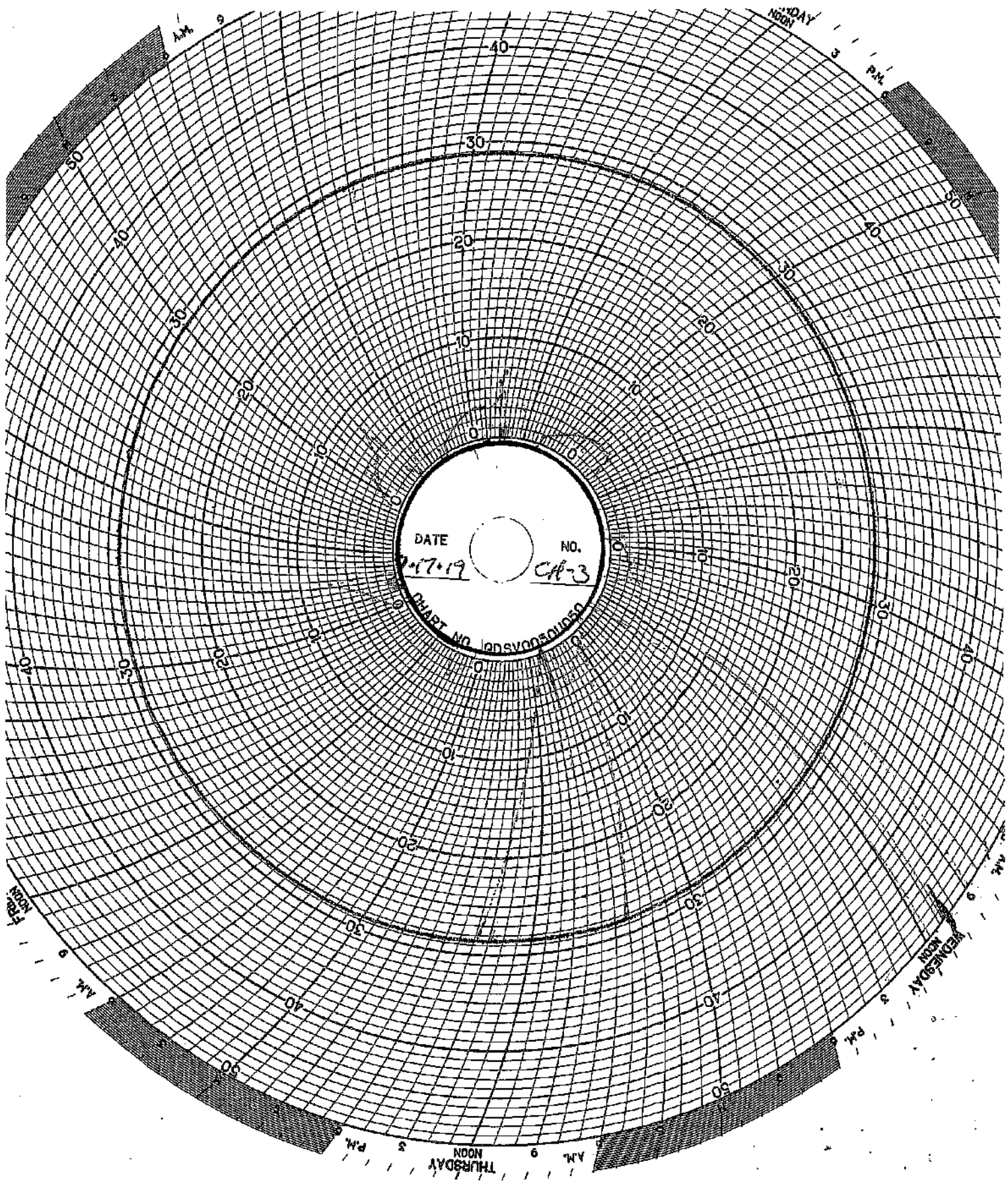
210

220

230

240

250



DATE 7-17-19 NO. CH-3

CHART NO. 10050050100

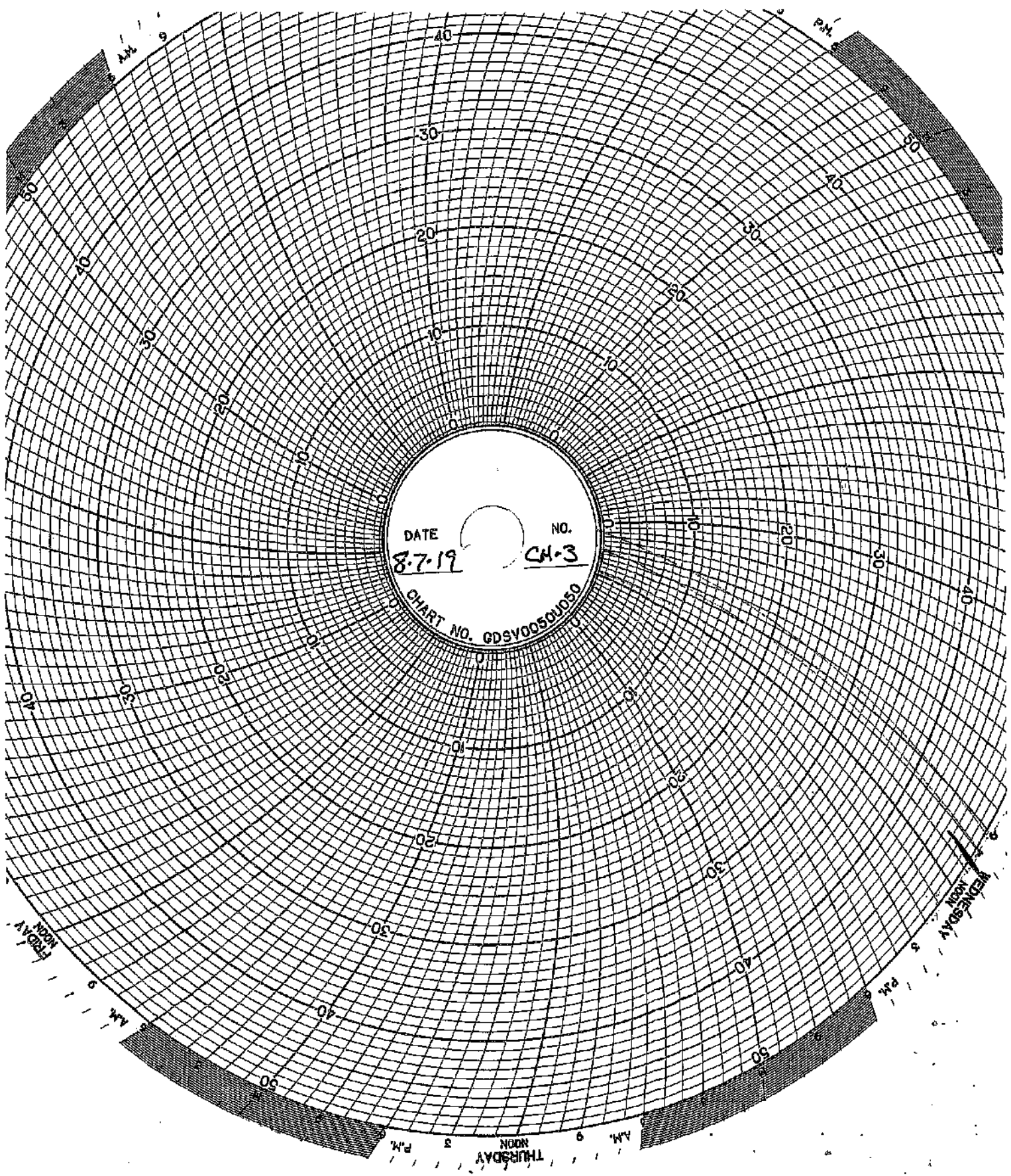
WEDNESDAY  
NOON  
9  
A.M.

THURSDAY  
NOON  
9  
P.M.

WEDNESDAY  
NOON  
9  
P.M.

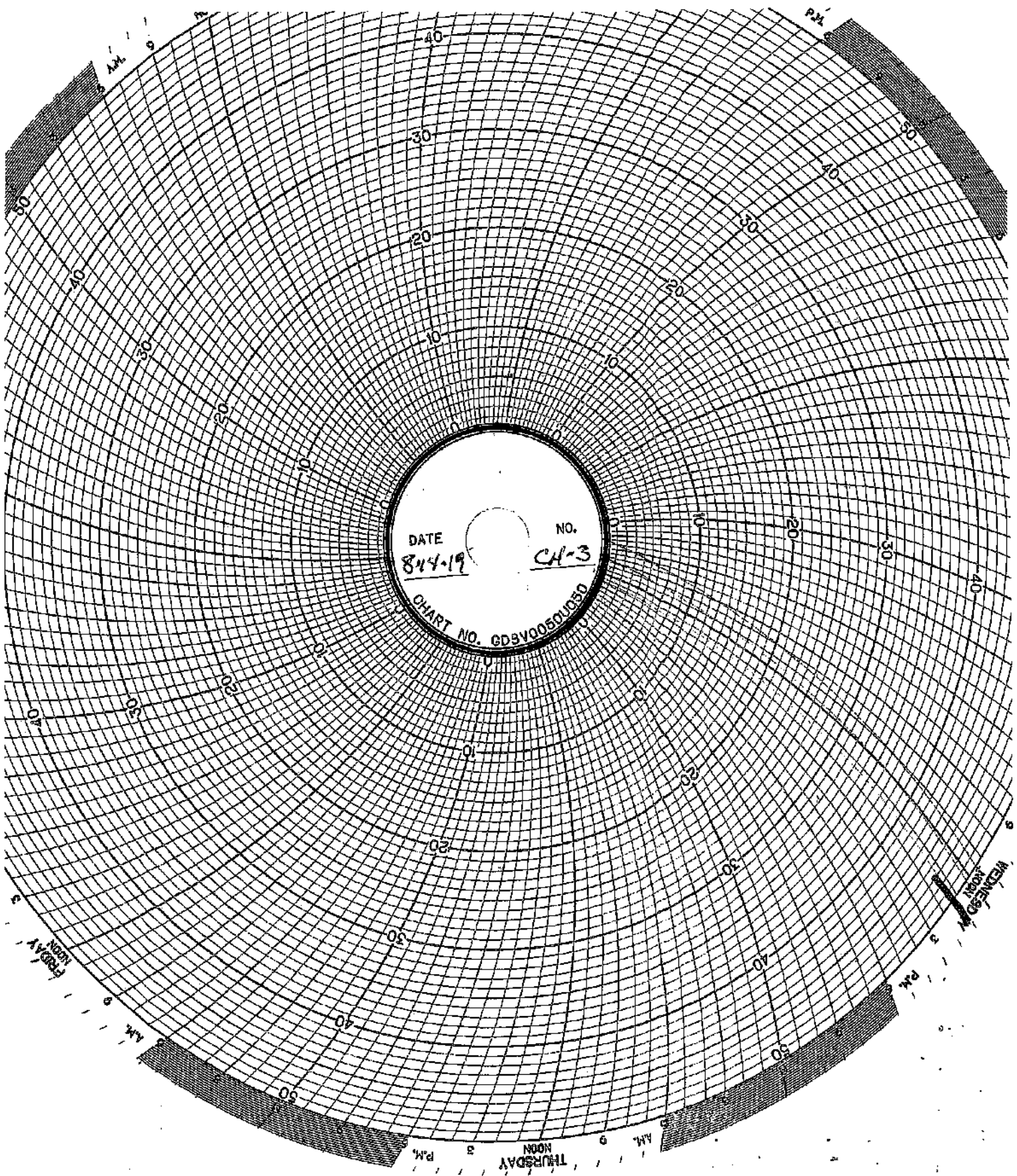
THURSDAY  
NOON  
9  
P.M.





DATE 8-7-19 NO. CH-3  
CHART NO. GDSV0050U050

FRIDAY 9 AM  
THURSDAY 9 AM  
WEDNESDAY 9 AM  
TUESDAY 9 AM  
MONDAY 9 AM  
SUNDAY 9 AM



DATE 8-4-19  
NO. CA-3  
CHART NO. GDSV00501050

AM. PM.  
FRIDAY THURSDAY  
NOON NOON  
5 9 5 9  
P.M. P.M.

## **MAINTENANCE LOG**

**UIC Monthly Maintenance Log**

7/16-19/19	Well 2	Mechanical Integrity Testing
------------	--------	------------------------------

## **CORROSION MONITORING**

## **CORROSION MONITORING COUPONS VISUAL DESCRIPTION**

**Aug. 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. There is no change in 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 appears to be no effect on this coupon.

### **Stainless Steel Coupon**

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

**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	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	
8/30/2017	13.324 g	7.353 g	18.105 g	New Fiberglass coupon
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	
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	



# 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 48225  
PHONE (313) 865-3636  
FAX (313) 865-1771

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:

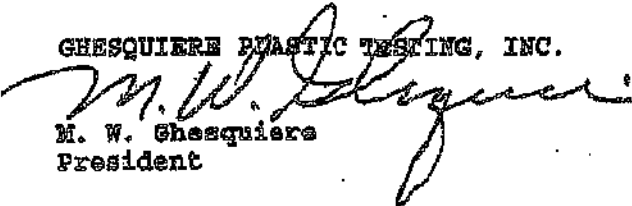
### BARCOL HARDNESS

#### Hardness

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

Specimen is being returned with this report for further evaluation.

GHESQUIERE PLASTIC TESTING, INC.

  
M. W. Ghesquiere  
President

MWG/kni

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 quality 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

# GHSQUIERE PLASTIC TESTING, INC.

20460 HARPER AVENUE  
HARPER WOODS, MI 48226  
PHONE (813) 885-3596  
FAX (813) 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.

GHSQUIERE PLASTIC TESTING, INC.

  
M. W. Ghesquiere  
President

MWG/em

# Ghesquiere Plastic Testing, Inc.

20450 HARPER AVENUE  
HARPER WOODS, MI 48225  
PHONE (313) 865-3535  
FAX (313) 865-1771

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  
Remulus, MI 48174

Prepared By:

*Melissa Martin*  
Sr. Project Technician

Approved By:

*Jim Drummond*  
Physical & Plastics Testing, Manager



An AZLA ISO 17025 Accredited Testing Laboratory — Certificate Numbers 251.01 & 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 liability of any kind is herein constituted 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 AZLA for the test methods listed on the attached scope.

[www.ardl.com](http://www.ardl.com)

2887 Gilchrist Rd. | Akron, Ohio 44306 | [answers@ardl.com](mailto:answers@ardl.com)  
Toll Free: (800) 638-ARDL | Worldwide: (330) 794-8890 | Fax: (330) 794-8610



Testing. Development. Problem Solving.

October 2, 2014

John Frost  
Environmental Geo-Technologies, LLC

Page 2 of 2  
PN118925

**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**

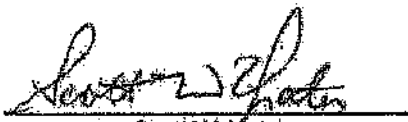
Barcol Hardness, Instant

97

Prepared By:

  
Melissa Martin  
Sr. Project Technician

Approved By:

  
Scott W. Yates  
Plastics Testing Assistant Manager

www.ardl.com

2887 Gilchrist Rd. | Akron, Ohio 44305 | answers@ardl.com  
Toll Free (800) 850-ARDL | Worldwide (330) 794-6600 | Fax (330) 794-6610



Progress Through Innovation, Technology and Customer Satisfaction

October 22, 2015

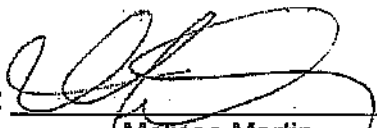
# • TEST REPORT •

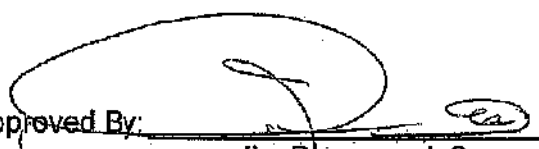
**PN 125322**  
**PO 00154**

## PLASTICS TESTING DEPARTMENT

Prepared For:

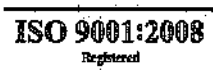
**John Frost**  
**Environmental Geo-Technologies, LLC**  
**28470 Citrin Drive**  
**Romulus, MI 48174**

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



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, product 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.

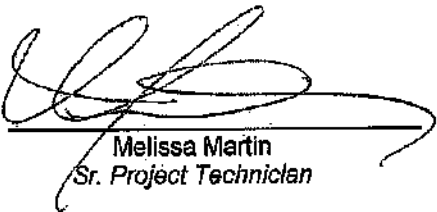
**BARCOL HARDNESS ASTM D 2583-13a**  
Instant Reading

**Results**

Barcol Hardness, Instant

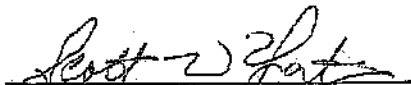
96

Prepared By:



Melissa Martin  
Sr. Project Technician

Approved By:



Scott W. Yates  
Plastics Testing Assistant Manager

to





Progress Through Innovation, Technology and Customer Satisfaction

December 12, 2016


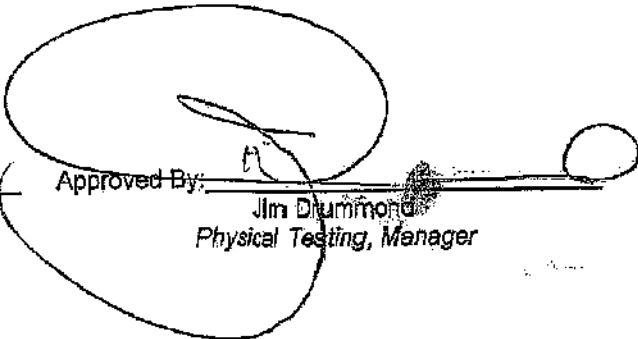
# TEST REPORT

PN 132662  
PO

## PLASTICS TESTING DEPARTMENT

Prepared For:

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

Prepared By:  Approved By: 

*Melissa Martin*  
Senior Project Technician

*Jim Duminore*  
Physical Testing, Manager

Rev 041816



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



Lettings 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 process as stated 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 132682


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

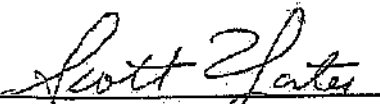
**RECEIVED:** One (1) small section identified as; Fiberglass Coupon.

**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 041918



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 constituted 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**

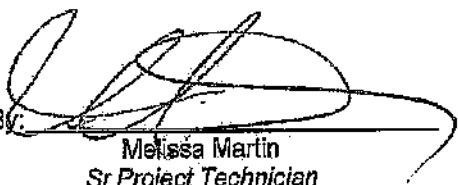
Instant Reading

**Results**

Barcol Hardness, Instant

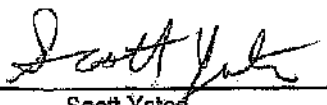
96

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.\**

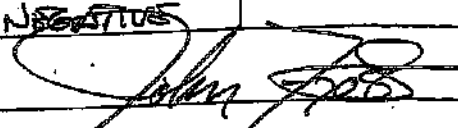
**INJECTION  
FINGERPRINTS**

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

RECEIVING & APPROVAL FORM

Date	8-12-19
Receiving ID#	108121901
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	JKF
Sampled by	JKF

Compatible? (RT# ~ )	<input checked="" type="checkbox"/> Yes No	Barium	
PCBs (ppm) (Oily Waste Only)?	NA	Calcium	
TOC (ppm) (CC Waste Only)?	NA	Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	7.3	Sodium Chloride	
Cyanides? (mg/L)	<30	Bicarbonate	
Sulfides? (ppm)	<200	Carbonate	
Specific Gravity	1.0	TDS	
Physical Description	Liquid	Resistivity	
Stream Consistency	<input checked="" type="checkbox"/> Yes No	Sulfate	
Oil in Sample	Yes <input checked="" type="checkbox"/> No		
Temperature	71°F		
Conductivity	7.7 mS		
% Solids	0.1		
Turbidity	Yes <input checked="" type="checkbox"/> No		
Color (visual)	NONE		
TSS (%)	<0.1		
Radiation Screen (as needed)	NEGATIVE		
Lab Signature			

**WASTE STREAMS  
CHARACTERIZATIONS**

Attn Rick Powell

**ENVIRONMENTAL GEO-TECHNOLOGIES, LLC**

28470 Citrin Dr, Romulus, MI 48174. Telephone 734 946 1000. Fax 734 946 1002

**Generator Waste Profile**

Profile # **01419**

**GENERATOR INFORMATION**

Name: [REDACTED] USEPA ID# [REDACTED]  
Facility Address: [REDACTED] SIC/NAICS Code: [REDACTED] State Code: [REDACTED]  
City: [REDACTED] State: [REDACTED] Zip Code: [REDACTED]  
Contact: [REDACTED] Title: [REDACTED] Phone: [REDACTED] Fax: ( ) [REDACTED]

**BILLING INFORMATION**

SAME AS ABOVE

Company Name: [REDACTED]  
Address: [REDACTED]  
City: [REDACTED] State: [REDACTED] Zip Code: [REDACTED]  
Attention: [REDACTED] Phone: [REDACTED] Fax: ( ) [REDACTED]

**WASTE INFORMATION**

Name of Waste/Common Chemical Name:

Aromatic Waste Water

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

Steam condensate generated from manufacturing of polyurethane products (collected in a reactor)

**USEPA / STATE WASTE IDENTIFICATION**

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

**PHYSICAL CHARACTERISTICS OF WASTE**

<b>Color:</b> <input type="checkbox"/> White/Clear <input checked="" type="checkbox"/> Black/Brown <input type="checkbox"/> Other _____	<b>Suspended Solids:</b> <input checked="" type="checkbox"/> 0-1 % <input type="checkbox"/> 3-5 % <input type="checkbox"/> 1-3 % <input type="checkbox"/> > 5%	<b>Layers:</b> <input type="checkbox"/> Multi-Layered <input type="checkbox"/> Bi-Layered <input checked="" type="checkbox"/> Single Phase	<b>Specific Gravity:</b> <input type="checkbox"/> <0.8 <input checked="" type="checkbox"/> 1.0 - 1.2 <input type="checkbox"/> 0.8 - 1.0 <input type="checkbox"/> 1.3 - 1.4 Exact / Other _____	<i>acceptable</i> <b>080619</b>
--	--	---	---	------------------------------------

pH:  NA  ≤ 2  2 - 4  4 - 6  6 - 8  8 - 10  10 - 12.5  ≥ 12.5

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

VOC CONCENTRATION - 207600 PPM (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>Water</u>	<u>99.97</u>	%			
<u>1,4 dioxane</u>	<u>2</u>	<u>0.1</u>			
<u>tetrahydrofuran</u>	<u>0.1</u>	<u>0.1</u>			
		%			







301 Pulling Mill Road - Middletown, PA 17057 - Phone: 717-944-8841 - Fax: 717-944-1436 - www.alsglobal.com

NELAP Certifications: NJ PA010, NY 11759, PA 22-293 DoD ELAP: P.JLA74618  
 State Certifications: FL E871113, WA C999, MD 128, VA 460157, WV DW 9961-C, WV 343

**ANALYTICAL RESULTS**

Workorder: [Redacted] Aromatic Wastewater

Lab ID: [Redacted] Date Collected: 7/23/2019 11:10 Matrix: Waste Water  
 Sample ID: Aromatic Date Received: 7/23/2019 14:14

Parameter	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr
<b>VOLATILE ORGANICS</b>								
Tetrahydrofuran	506000		ug/L	5000	EPA 624.1		7/26/19 03:19	PDK D
<b>Surrogate Recoveries</b>								
1,2-Dichloroethane-d4 (S)	113		%	72 - 142	EPA 624.1		7/23/19 23:46	PDK C
1,2-Dichloroethane-d4 (S)	114		%	72 - 142	EPA 624.1		7/26/19 03:19	PDK D
4-Bromofluorobenzene (S)	104		%	73 - 119	EPA 624.1		7/23/19 23:46	PDK C
4-Bromofluorobenzene (S)	112		%	73 - 119	EPA 624.1		7/26/19 03:19	PDK D
Dibromofluoromethane (S)	79.6		%	74 - 132	EPA 624.1		7/23/19 23:46	PDK C
Dibromofluoromethane (S)	104		%	74 - 132	EPA 624.1		7/26/19 03:19	PDK D
Toluene-d8 (S)	100		%	75 - 133	EPA 624.1		7/23/19 23:46	PDK C
Toluene-d8 (S)	94.5		%	75 - 133	EPA 624.1		7/26/19 03:19	PDK D
<b>SEMI-VOLATILES</b>								
1,4-Dioxane	20200000	5	ug/L	701000	EPA 625.1	7/30/19 13:45 DXL	7/31/19 19:37	CGS A
<b>Surrogate Recoveries</b>								
2,4,6-Trifluorophenol (S)	0	3	%	47 - 128	EPA 625.1	7/30/19 13:45 DXL	7/31/19 19:37	CGS A
2-Fluorobiphenyl (S)	0	2	%	52 - 118	EPA 625.1	7/30/19 13:45 DXL	7/31/19 19:37	CGS A
2-Fluorophenol (S)	0	6	%	20 - 87	EPA 625.1	7/30/19 13:45 DXL	7/31/19 19:37	CGS A
Nitrobenzene-d5 (S)	0	1	%	27 - 139	EPA 625.1	7/30/19 13:45 DXL	7/31/19 19:37	CGS A
Phenol-d5 (S)	0	7	%	10 - 81	EPA 625.1	7/30/19 13:45 DXL	7/31/19 19:37	CGS A
Terphenyl-d14 (S)	0	4	%	46 - 133	EPA 625.1	7/30/19 13:45 DXL	7/31/19 19:37	CGS A

*Jessica Lee Smith*  
 Jessica Lee Smith  
 Project Coordinator

**ALS Environmental Laboratory Locations Across North America**

Canada: Burlington • Calgary • Centre of Excellence • Edmonton • Fort McMurray • Fort St. John • Grande Prairie • London • Mississauga • Richmond Hill • Saskatoon • Thunder Bay  
 Vancouver Waterloo • Winnipeg • Yellowknife United States: Cincinnati • Everett • Fort Collins • Holland • Houston • Middletown • Salt Lake City • Spring City • York Mexico: Monterrey

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8-13-19
Receiving ID#	[REDACTED]
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	RP
Sampled by	JKF

Compatible? (RT# )	<input checked="" type="radio"/> Yes <input type="radio"/> No	Barium	
PCBs (ppm)(Oily Waste Only)?	NA	Calcium	
TOC (ppm)(CC Waste Only)?	NA	Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	5.0	Sodium Chloride	
Cyanides? (mg/L)	<30	Bicarbonate	
Sulfides? (ppm)	<200	Carbonate	
Specific Gravity	1.00	TDS	
Physical Description	Liquid	Resistivity	
Stream Consistency	<input checked="" type="radio"/> Yes <input type="radio"/> No	Sulfate	
Oil In Sample	Yes <input checked="" type="radio"/> No		
Temperature	72°F		
Conductivity	0.8 mS		
% Solids	1.2%		
Turbidity	Yes <input checked="" type="radio"/> No		
Color (visual)	Grey		
TSS (%)	<0.1		
Radiation Screen (as needed)	NEGATIVE		
Lab Signature	