Environmental GEO-Technologies, LLC

July 31, 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-eighth 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 June, 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.

rjp073119/EGTEPAMonthlyReport-June, 2019

P 734-946-1000 F 734-946-1002 - 28470 Citrin Drive. Romulus, Michigan 48174
www.envgeotech.com

AVERAGE INJECTION RATE

Calculation of Average Injection Rate

CURRENT REPORTING YEAR 2019

CURRENT REPORTING MONTH June

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	8,400	0	8,400
Since facility first injected			14,391,928
MI-163-1W-C011, Well #2-12			
Current Month	0	0	0
Since facility first injected			4,648,736
		Lifetime Combined	19,040,664

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 66

_____ lifetime number of months of injection × 43,830 minutes/month

= 2,892,780 minutes of injection

Lifetime combined injected volume 2,892,780 ÷ 19,040,664 minutes of injection

= 6.5 gpm average injection rate

WELL 1 DATA

Well 01 Injection 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)
6/1/2019	123.1	123.7	21.5	21.7	825.9	826.5	13.6	13.6	0.0	0.0	702.6	703.1
6/2/2019	123.2	123.7	21.4	21.7	825.7	826.4	13.6	13.6	0.0	0.0	702.3	702.8
6/3/2019	123.1	123.8	21.4	21.7	825.2	826.1	13.6	13.6	0.0	0.0	702.0	702.6
6/4/2019	123.0	123.7	21.4	21.7	824.9	825.8	13.6	13.6	0.0	0.0	701.7	702.5
6/5/2019	2.2	123.9	21.5	21.7	765.7	829.9	13.6	13.6	0.0	0.0	701.7	827.3
6/6/2019	121.9	122.4	21.5	21.7	824.7	826.2	13.6	13.6	0.0	0.0	702.4	704.1
6/7/2019	121.8	122.5	21.4	21.7	824.2	825.2	13.6	13.6	0.0	0.0	702.1	702.9
6/8/2019	121.8	122.4	21.4	21.7	824.0	824.8	13.6	13.6	0.0	0.0	701.9	702.6
6/9/2019	121.9	122.3	21.4	21.7	823.9	824.5	13.6	13.6	0.0	0.0	701.8	702.4
6/10/2019	122.1	122.4	21.4	21.7	823.6	824.1	13.6	13.6	0.0	0.0	701.4	702.1
6/11/2019	121.7	122.5	21.4	21.7	822.8	823.9	13.6	13.6	0.0	0.0	700.8	701.6
6/12/2019	121.9	122.3	21.4	21.7	822.8	823.5	13.6	13.6	0.0	0.0	700.8	701.5
6/13/2019	122.1	122.5	21.4	21.7	822.6	823.4	13.6	13.6	0.0	0.0	700.3	701.2
6/14/2019	121.8	122.5	21.3	21.7	821.9	822.9	13.6	13.6	0.0	0.0	699.9	700.6
6/15/2019	121.9	122.2	21.4	21.7	822.1	822.6	13.6	13.6	0.0	0.0	700.1	700.6
6/16/2019	122.0	122.3	21.4	21.7	821.8	822.4	13.6	13.6	0.0	0.0	699.7	700.3
6/17/2019	121.7	122.2	21.4	21.6	821.3	821.9	13.6	13.6	0.0	0.0	699.4	699.9
6/18/2019	121.5	122.1	21.3	21.7	821.0	821.8	13.6	13.6	0.0	0.0	699.2	699.9
6/19/2019	121.5	122.1	21.4	21.7	820.7	821.6	13.6	13.6	0.0	0.0	699.0	699.7
6/20/2019	121.7	122.0	21.4	21.7	820.7	821.3	13.6	13.6	0.0	0.0	698.9	699.5
6/21/2019	121.2	121.9	21.3	21.7	819.9	820.9	13.6	13.6	0.0	0.0	698.5	699.1
6/22/2019	121.1	121.8	21.4	21.7	819.7	820.7	13.6	13.6	0.0	0.0	698.4	699.1
6/23/2019	121.1	121.7	21.4	21.7	819.6	820.5	13.6	13.6	0.0	0.0	698.2	699.0
6/24/2019	121.2	121.6	21.4	21.7	819.5	820.1	13.6	13.6	0.0	0.0	698.2	698.7
6/25/2019	1.9	121.9	21.5	24.2	171.4	819.9	13.6	13.6	0.0	0.0	168.9	817.2
6/26/2019	1.7	263.3	23.9	24.2	34.8	314.6	13.6	13.6	0.1	42.2	-124.8	299.7
6/27/2019	-6.1	527.7	24.0	24.2	51.7	639.6	13.6	13.6	0.2	111.2	-133.3	380.7
6/28/2019	-5.4	-4.4	23.9	24.2	158.1	182.6	13.6	13.6	0.0	0.0	162.8	187.8
6/29/2019	-5.0	-4.2	24.0	24.2	153.5	158.1	13.6	13.6	0.0	0.0	158.1	162.9
6/30/2019	-5.7	-4.0	24.0	24.2	151.5	153.6	13.6	13.6	0.0	0.0	155.8	158.2

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

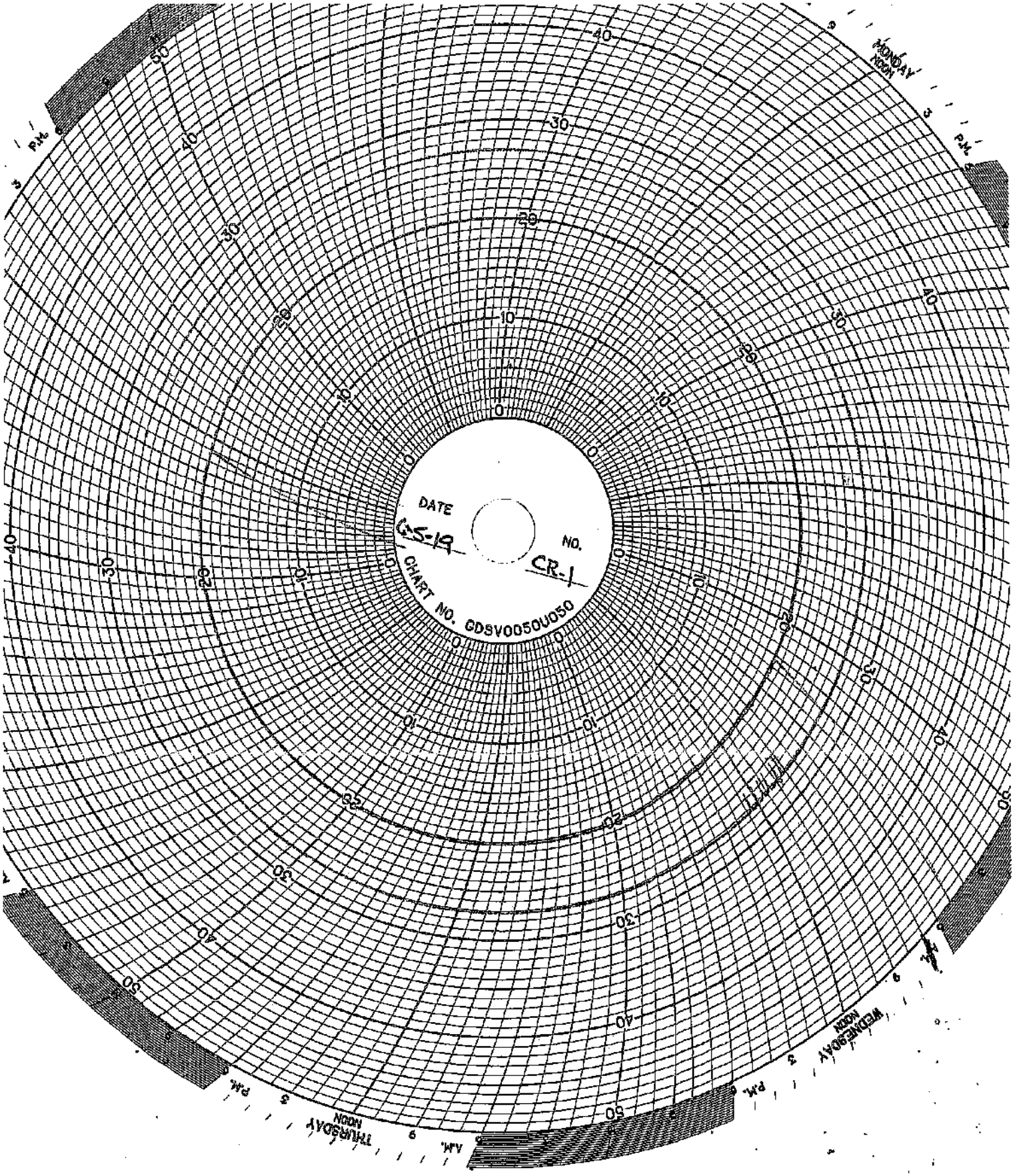
Red Pen – Well 1 Monthly Volume (chart value x 100,000)

Channel #3

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

Channel #4

Black Pen – Temperature (chart value x 0)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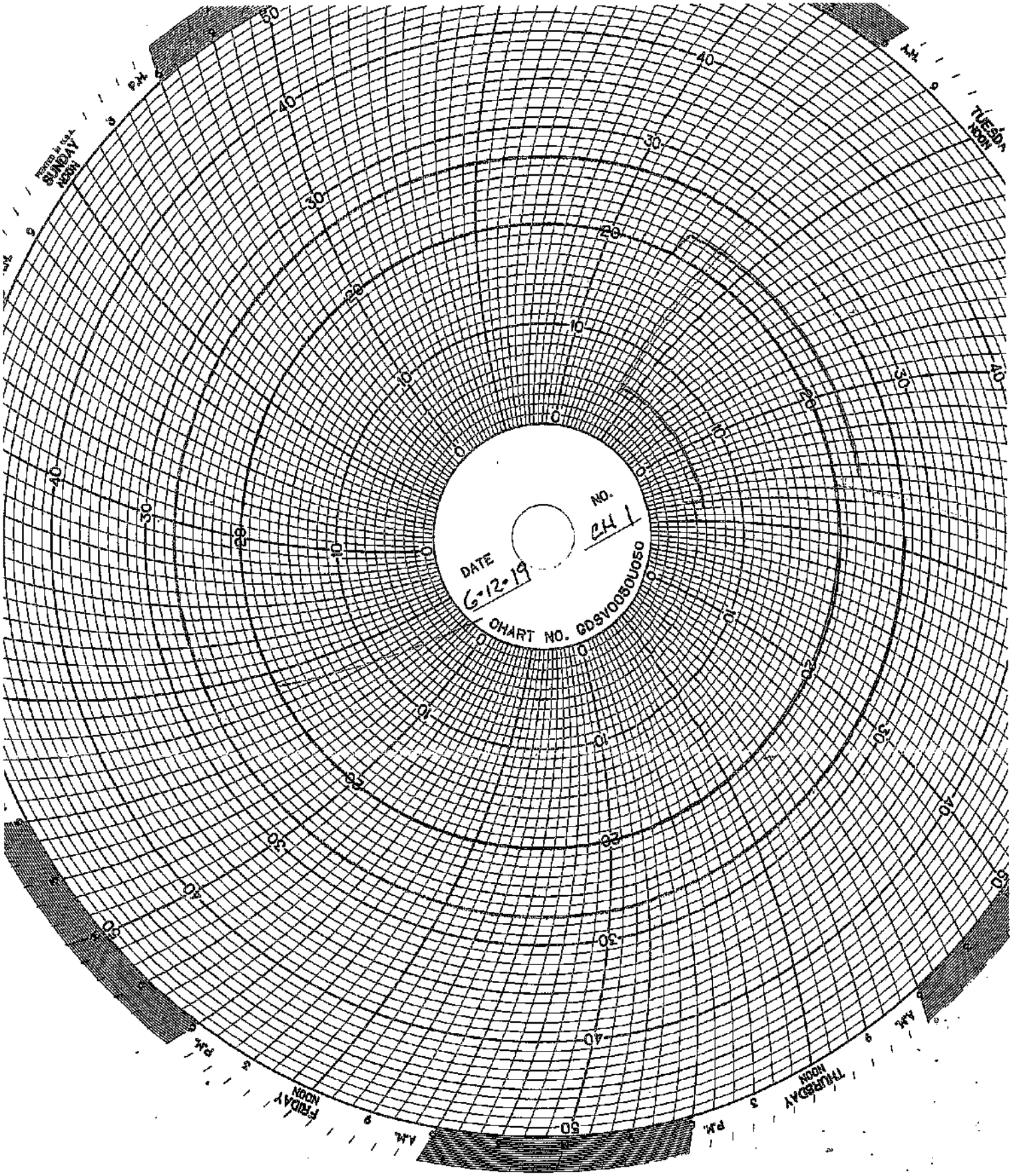
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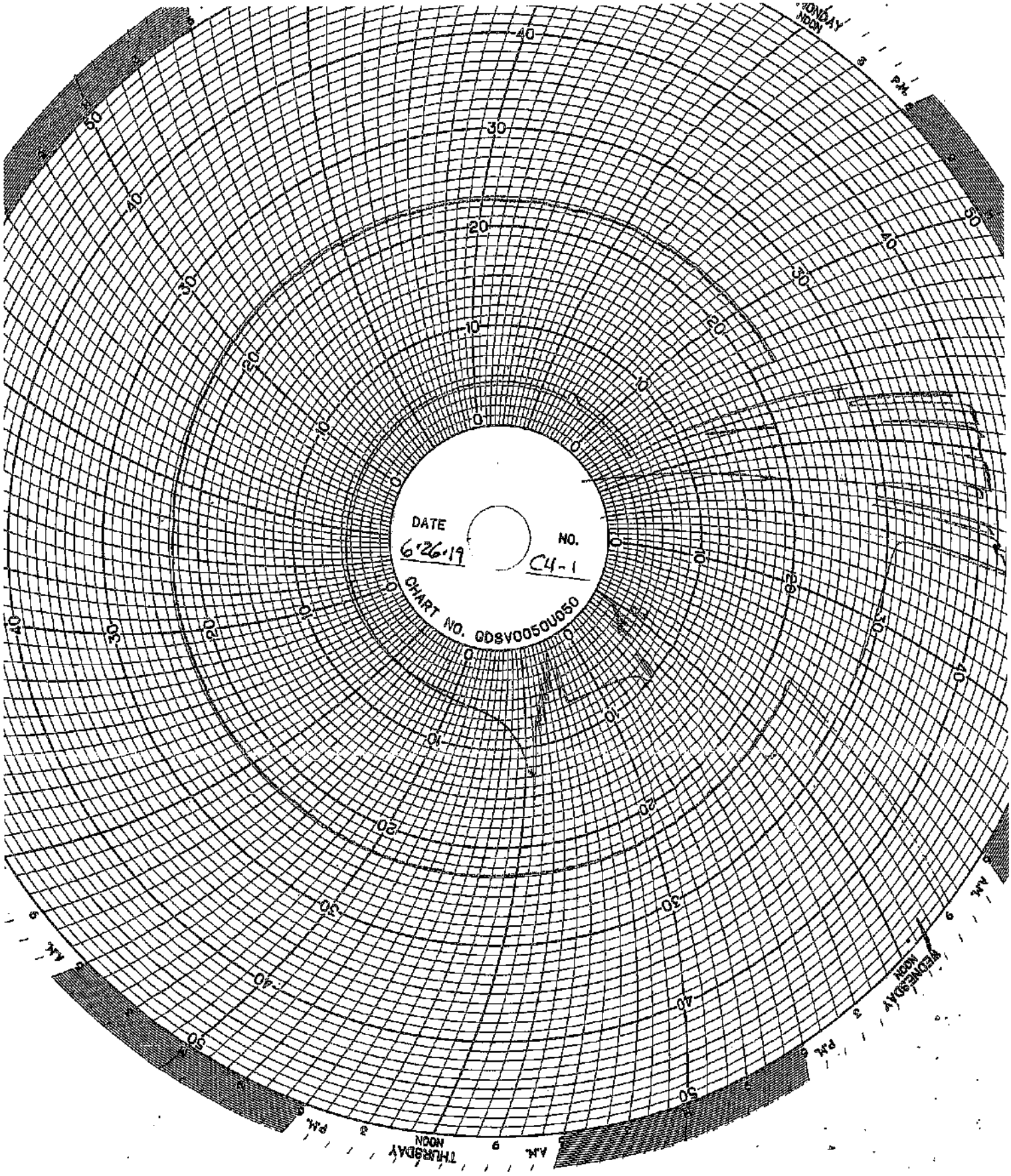
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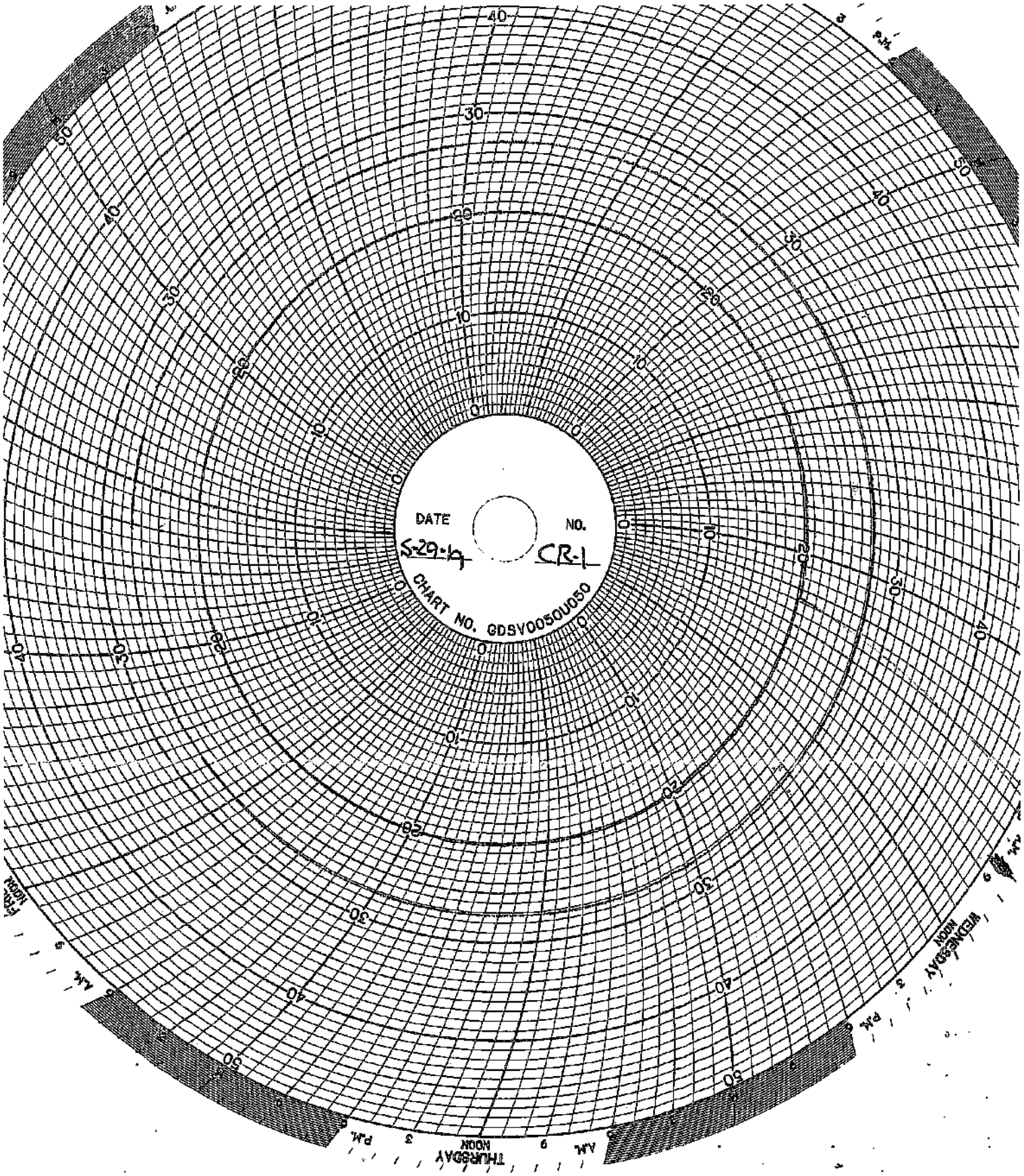
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WELL 2 DATA

Well 02 Injection 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 Differentail Pressure (PSIG)	Max Differential Pressure (PSIG)
6/1/2019	0.0	0.0	29.8	29.9	402.8	405.7	13.6	13.6	0.0	0.0	5.0	5.0
6/2/2019	0.0	0.0	29.6	30.1	403.1	405.7	13.6	13.6	0.0	0.0	5.0	5.0
6/3/2019	0.0	0.0	29.5	30.0	403.2	405.9	13.6	13.6	0.0	0.0	5.0	5.0
6/4/2019	0.0	0.0	29.7	30.0	403.4	406.2	13.6	13.6	0.0	0.0	5.0	5.0
6/5/2019	0.0	0.0	29.8	29.9	403.3	406.2	13.6	13.6	0.0	0.0	5.0	5.0
6/6/2019	0.0	0.0	29.8	29.9	403.5	406.2	13.6	13.6	0.0	0.0	5.0	5.0
6/7/2019	0.0	0.0	29.6	30.1	403.5	406.3	13.6	13.6	0.0	0.0	5.0	5.0
6/8/2019	0.0	0.0	29.6	30.1	402.2	406.5	13.6	13.6	0.0	0.0	5.0	5.0
6/9/2019	0.0	0.0	29.8	29.9	403.8	406.5	13.6	13.6	0.0	0.0	5.0	5.0
6/10/2019	0.0	0.0	29.5	29.9	403.9	406.5	13.6	13.6	0.0	0.0	5.0	5.0
6/11/2019	0.0	0.0	29.7	30.1	404.1	406.8	13.6	13.6	0.0	0.0	5.0	5.0
6/12/2019	0.0	0.0	29.6	30.0	404.2	406.9	13.6	13.6	0.0	0.0	5.0	5.0
6/13/2019	0.0	0.0	29.5	29.8	404.2	406.8	13.6	13.6	0.0	0.0	5.0	5.0
6/14/2019	0.0	0.0	29.6	30.0	404.4	407.0	13.6	13.6	0.0	0.0	5.0	5.0
6/15/2019	0.0	0.0	29.7	29.8	404.6	407.0	13.6	13.6	0.0	0.0	5.0	5.0
6/16/2019	0.0	0.0	29.4	30.0	404.7	407.0	13.6	13.6	0.0	0.0	5.0	5.0
6/17/2019	0.0	0.0	29.6	29.9	404.7	407.3	13.6	13.6	0.0	0.0	5.0	5.0
6/18/2019	0.0	0.0	29.5	29.9	404.6	407.4	13.6	13.6	0.0	0.0	5.0	5.0
6/19/2019	0.0	0.0	29.5	30.0	404.7	407.4	13.6	13.6	0.0	0.0	5.0	5.0
6/20/2019	0.0	0.0	29.7	29.8	404.7	406.1	13.6	13.6	0.0	0.0	5.0	5.0
6/21/2019	0.0	0.0	29.4	30.0	404.8	407.4	13.6	13.6	0.0	0.0	5.0	5.0
6/22/2019	0.0	0.0	29.4	30.0	404.9	407.5	13.6	13.6	0.0	0.0	5.0	5.0
6/23/2019	0.0	0.0	29.5	30.0	404.9	407.6	13.6	13.6	0.0	0.0	5.0	5.0
6/24/2019	0.0	0.0	29.7	29.8	404.9	407.7	13.6	13.6	0.0	0.0	5.0	5.0
6/25/2019	0.0	0.0	29.5	30.0	405.1	407.9	13.6	13.6	0.0	0.0	5.0	5.0
6/26/2019	0.0	0.0	29.6	30.1	404.8	407.9	13.6	13.6	0.0	0.0	5.0	5.0
6/27/2019	0.0	0.0	29.6	30.1	404.4	407.7	13.6	13.6	0.0	0.0	5.0	5.0
6/28/2019	0.0	0.0	29.6	30.1	402.5	407.5	13.6	13.6	0.0	0.0	5.0	5.0
6/29/2019	0.0	0.0	29.6	30.1	404.8	407.8	13.6	13.6	0.0	0.0	5.0	5.0
6/30/2019	0.0	0.0	29.6	30.1	405.0	407.9	13.6	13.6	0.0	0.0	5.0	5.0

Circle Chart Index

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

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Channel #1

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

Channel #2

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

Channel #3

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

Channel #4

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

Chart Recorder #2

Channel #1

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

Channel #2

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

Channel #3

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

Channel #4

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

Chart Recorder #3

Channel #1

Blue Pen – Injection pH Well 1 & 2 (chart value + 3.3)

Channel #2

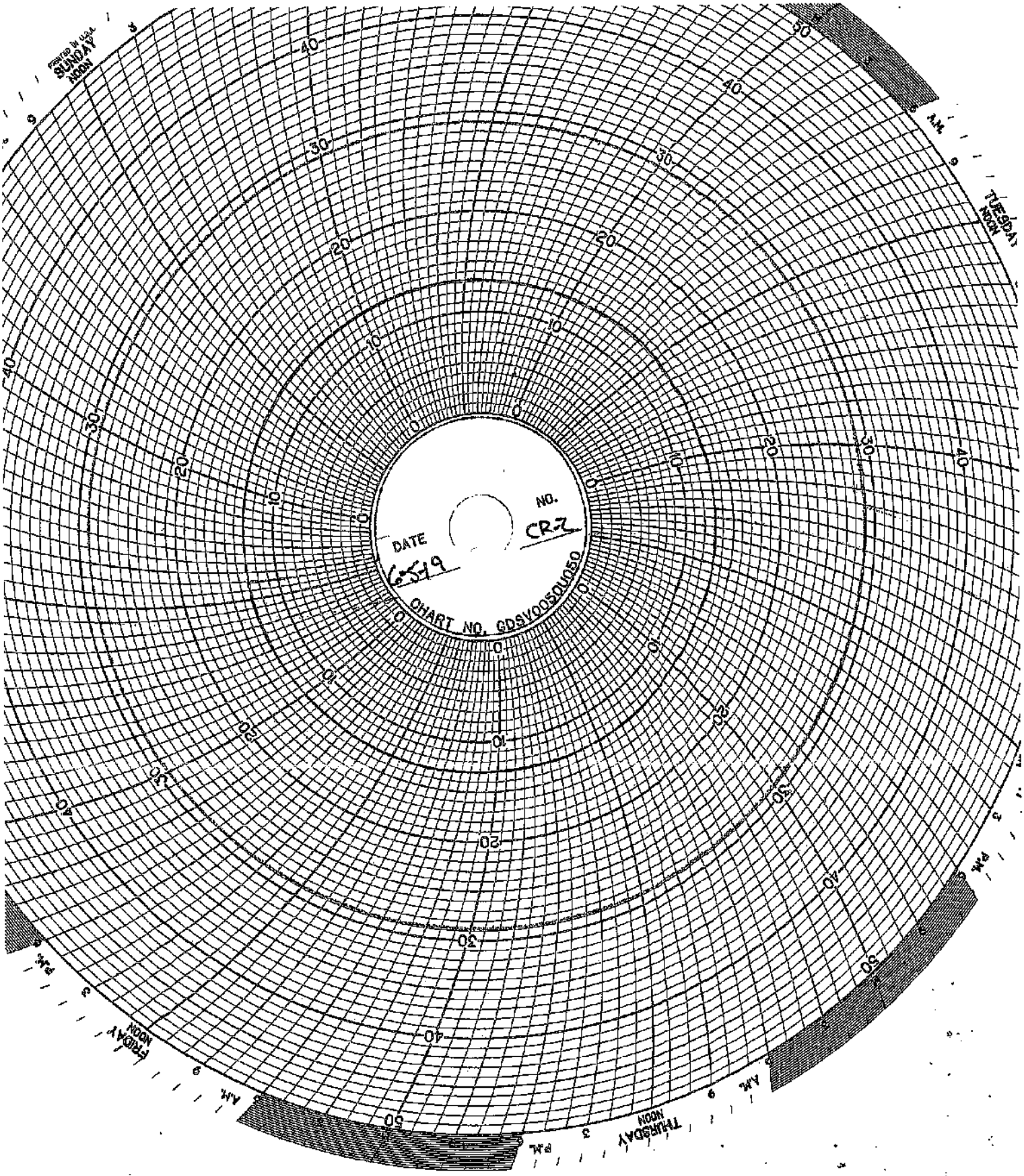
Red Pen – Well 1 Monthly Volume (chart value x 100,000)

Channel #3

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

Channel #4

Black Pen – Temperature (chart value x 0)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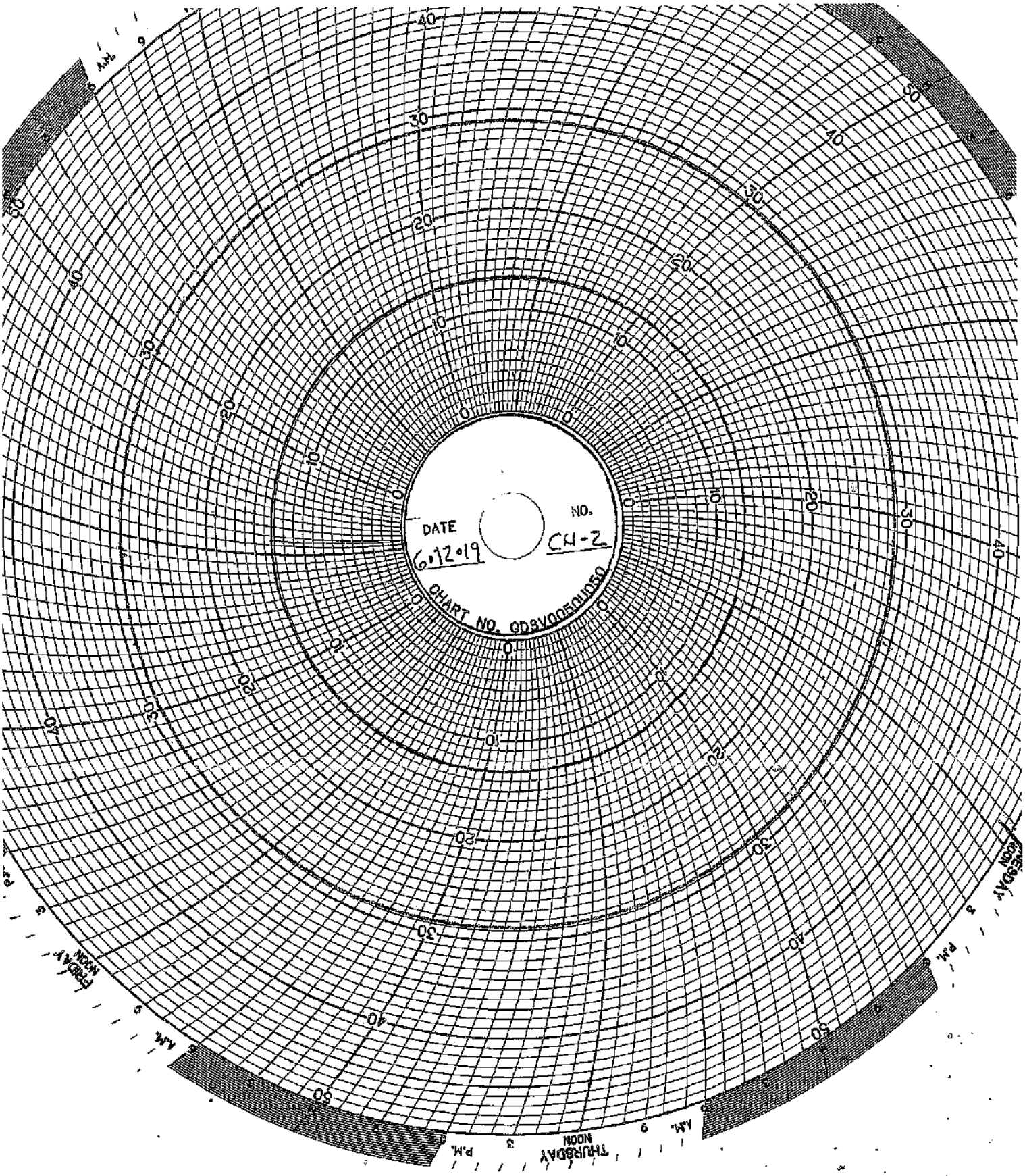
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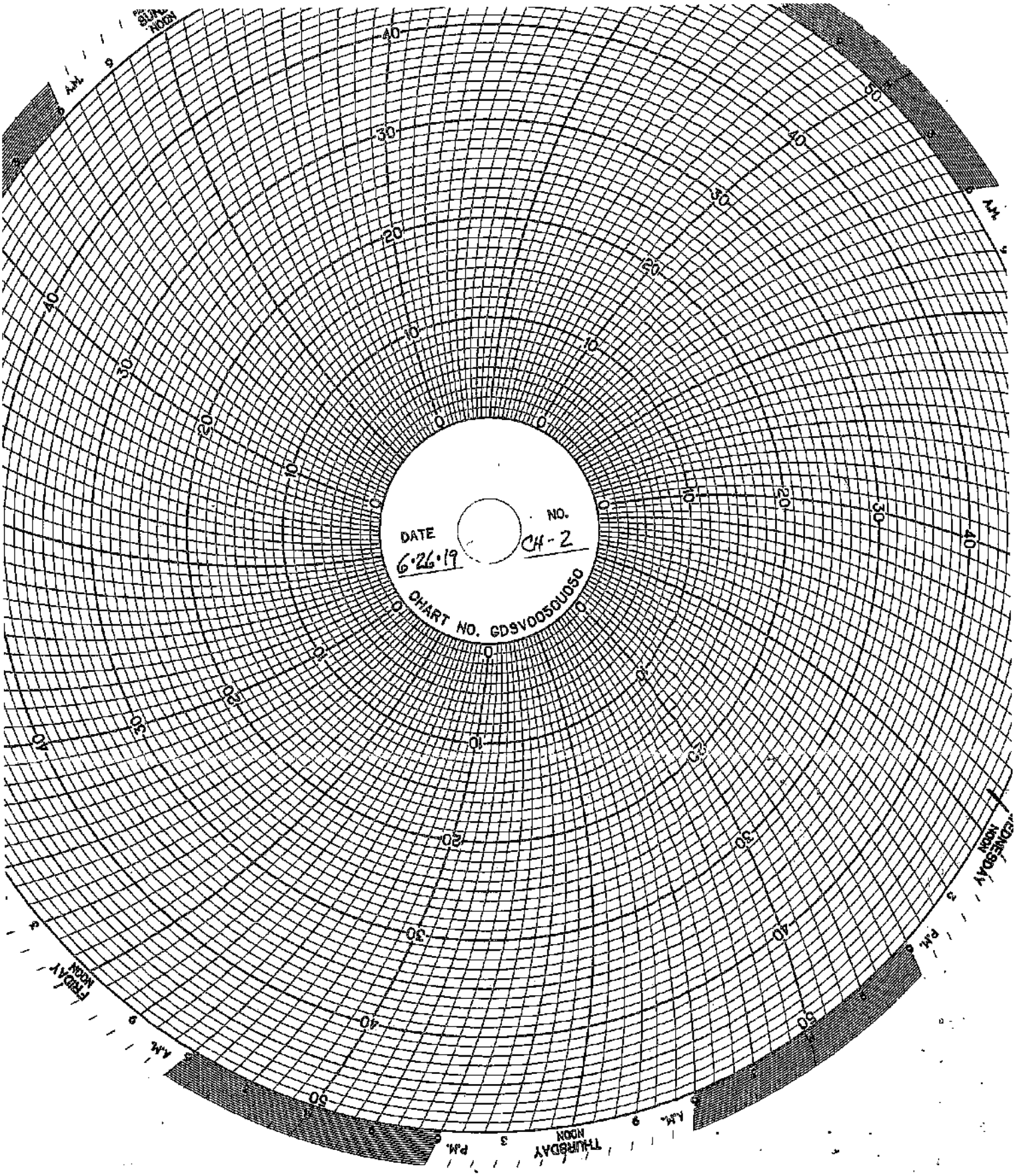
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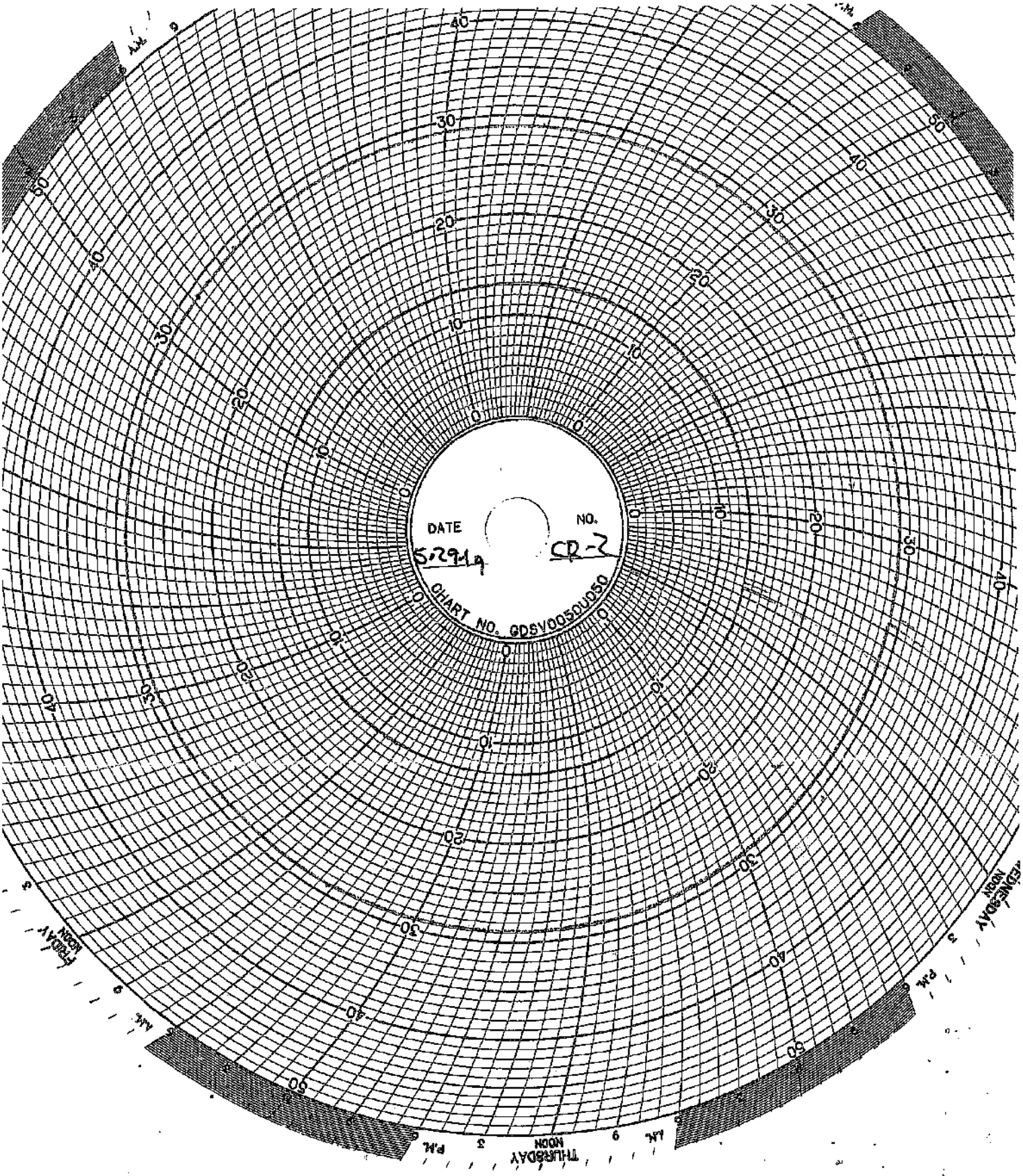
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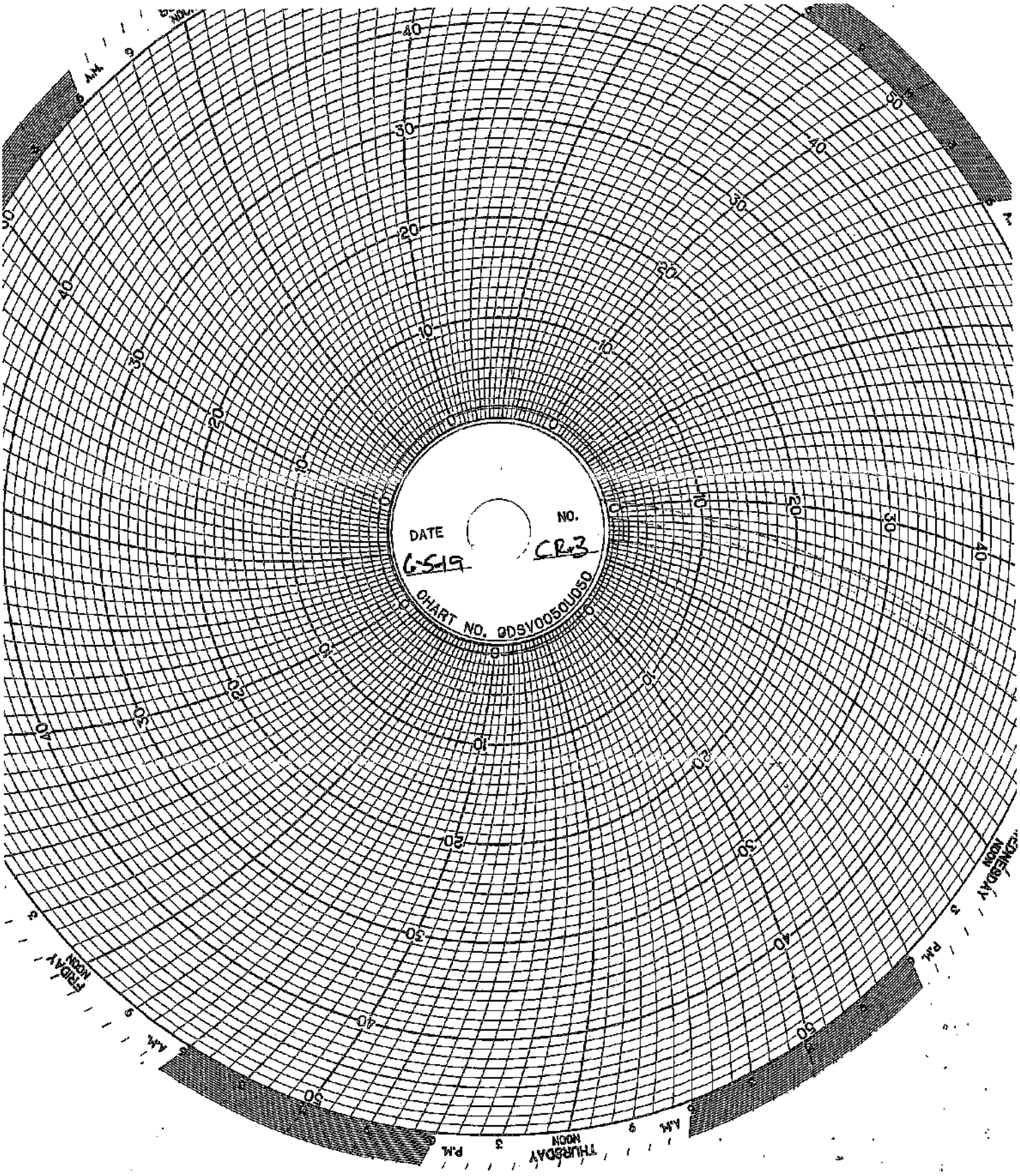
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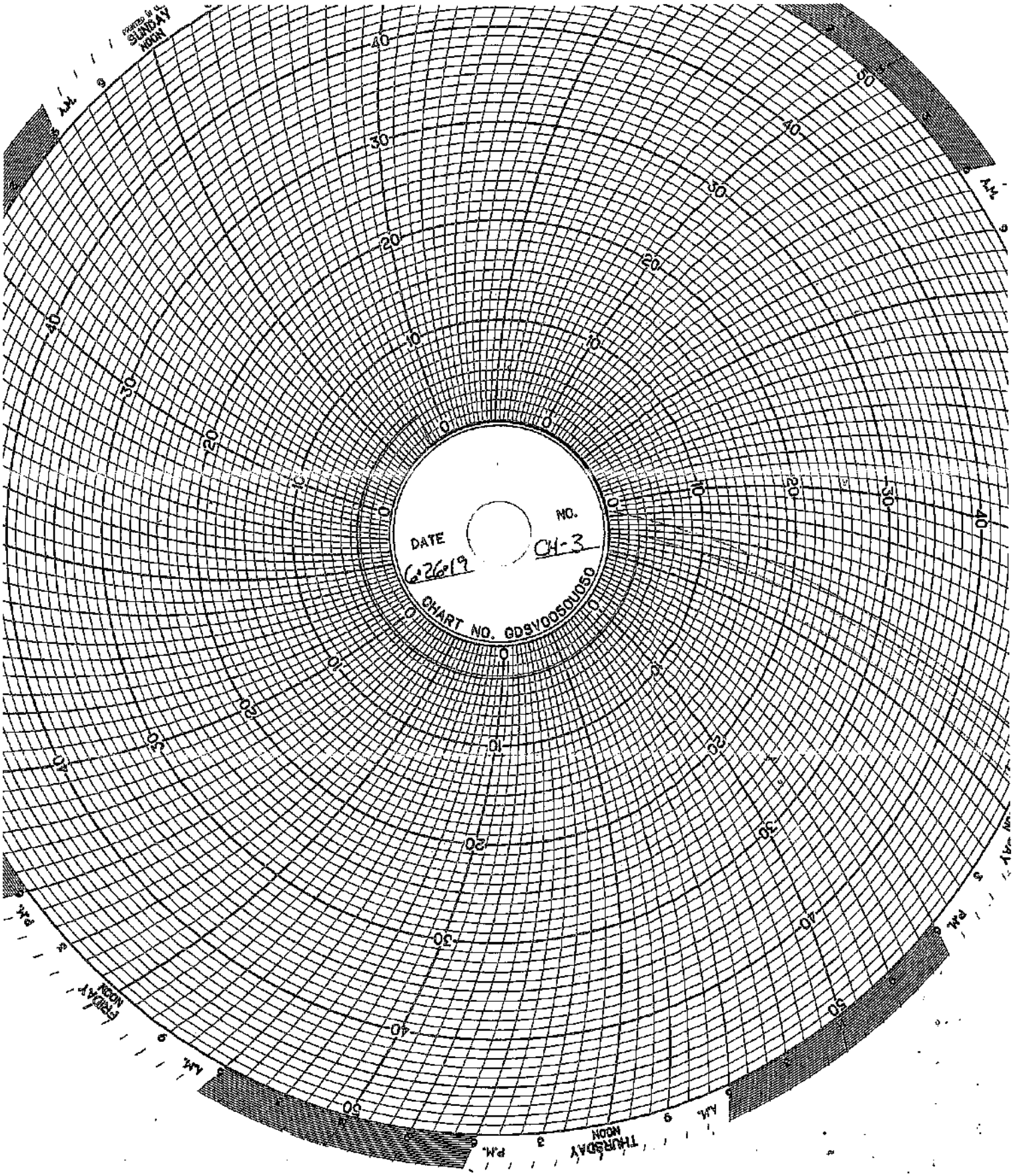
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SATURDAY

MAINTENANCE LOG

UIC Monthly Maintenance Log

6/5/2019	well 1	Sampled downhole sediments
6/26/2019	well 1	Worked well with mud motor to clean well and reestablish flow rates
6/27/2019	well 1	Used 5 port flow nozzel to pump nitrogen and water and recovering returns to clean the well
6/30/2019	well 1	Performed pump test on the well

Daily Report

Project No:	192026I			**Date**	6/30/2019		
Operator:	Republic Service			**Report No:**	3	**Contractor:**	n/a
Well Name & No:	EGT # 1-12			**Reported By:**	Clay Chauviere	**Rig No.:**	n/a
County / Parish:	Wayne	**State:**	MI	**Next Activity:**			

Time Log		Elapsed	Activity				
From	To	Hours	Details of Operations				
0730	0745	0.25	JSA				
0745	0945	2.00	Presure tested pump lines to 1500 psi.				
			SITP 0 psi & SICP 151 psi.				
			EGT pressure up casing to 850 psi per EPA requirement to have a differtenial pressure between casing and tubing.				
0945	1515	5.50	Performed Injection Test with 8.4 ppg fresh (storm) water.				
			BBLs	BPM	TP psi	SICP psi	
			10	1.00	750	1229	
			16	0.78	830	1241	
			30	0.69	870	1243	
			44	0.59	900	1245	
			62	0.66	940	1174	
			85	0.44	936	1255	
			76	0.39	914	1240	
			89	0.41	920	1238	
			100	0.47	920	1240	
			112	0.47	920	1252	
			119	0.46	920	1255	
			121	0.47	920	1252	
			134	0.47	920	1255	
			141	0.47	930	1255	
			146	0.41	890	1226	
			153	0.42	890	1230	
1515	1630	1.25	Shut down pump. RU to frac tank with 8.8 ppg brine water to transfer to pump.				
			SITP 150 psi & SICP 882 psi				
1630	1900	2.50	Injected 8.8 ppg brine water.				
			BBLs	BPM	TP psi	SICP psi	
			10	0.47	900	1248	
			15	0.47	900	1221	
			30	0.52	920	1278	
			39	0.46	900	1264	
			50	0.53	930	1295	
			60	0.51	925	1306	
			64	0.52	930	1311	
			71	0.53	930	1314	
1900	1915	0.25	Shut down pump. ISITP 550 psi and ISICP 1070 psi				
1915	2030	1.25	RD & MO B&B Oilfield Equipment pump mounted skid.				
Total Hours:		11.75					

Morning Safety Topic:	**Safety Meeting**: Discuss the Golden **Principals** of Safety, Zero **Harm**, slips, **trips** and falls, **stop work authority**, **Good Hand Placement**. Take the necessary time it takes to do the job safely.

J.O. WELL SERVICE & TESTING, INC.

6825 Lea Pick Road • Commercial Park East • Mt. Pleasant, MI 48858
Phone: (989) 772-4221 • Fax: (989) 772-3438

27057

TO: Republic Services

DATE: 6-5-19

LEASE: EGT

WELL: 1-12

CUSTOMER P.O.:

TOTAL HOURS: HOURLY RATE: WIRELINE SERVICE CHARGE:

VEHICLE	ROUNDTRIP MILES	RATE	MILEAGE CHARGE:

E/L w/ tank R.I.H. w/ 1.75" bailer. Set down @ 4230' G.L.M. Stroke bailer and went thru restriction. Continue dummy bail and tag bottom @ 4395' G.L.M. Stroke bailer, P.O.O.H. Had about 1 cup of sample. R.I.H. again to 4395' Stroke. P.O.O.H. Had about 2 cups of sample, was solid both times. R.I.H. again to 4395' P.O.O.H. Had a sample that was slurry. R.I.H. again to 4395'. Stroke. P.O.O.H. Had slurry. Rig down.

Quoted price on 5-31-19

[redacted]

TOTAL $ [redacted]

COMPANY REP. SIGNATURE:

CREW: Ayka Sullivan

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	
5/31/2015	13.334 g	6.084 g	6.784 g	
6/30/2016	13.328 g	10.942 g	6.793 g	New stainless steel coupon
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	
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	

CORROSION MONITORING COUPONS VISUAL DESCRIPTION

June, 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 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) 885-0535
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/kmi

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

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
Romulus, MI 48174

Prepared By: _____
Melissa Martin
Sr. Project Technician

Approved By: _____
Jim Drummond
Physical & Plastics Testing, Manager

October 2, 2014

John Frost
Environmental Geo-Technologies, LLC

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

st

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

October 22, 2015

John Frost
Environmental Geo-Technologies, LLC

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

tc

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

December 12, 2016

John Frost
Environmental Geo-Technologies, LLC

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.

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

www.ardl.com | 2887 Gilchrist Rd. | Akron, Ohio 44305 | answers@ardl.com | Toll Free (800) 620-ARDL
Fax (330) 794-6610 | Worldwide (330) 794-6600

December 13, 2017

John Frost
Environmental Geo-Technologies, LLC

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

RECEIVING INFORMATION	
Date	6-25-19
Receiving ID#	I0625190I
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	JKF
Sampled by	JKF

ANALYTICAL			
Compatible? (RT#)	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	7.2	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.0	TDS	2%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	72°F		
Conductivity	42mS		
% Solids	2%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	<0.1		
Radiation Screen (as needed)			
Lab Signature			

WASTE STREAMS
CHARACTERIZATIONS

Environmental GEO-Technologies, LLC

July 1, 2019

United States Environmental Protection Agency
Region 5, WU-16J
77 West Jackson Blvd.
Chicago, Illinois 60604-3590
ATTN: UIC Branch, DI Section

Re: Written Report, EGT Injection Parameter Exceedance, Well #1 Annulus Differential Pressure (in conformance with MI-163-1W-C010, Part III.A, page 1 of 3)

Ladies & Gentlemen:

Environmental Geo-Technologies, LLC ("EGT") is writing this report to inform you that one injection parameter, Annulus Differential Pressure was exceeded on June 26, 2019.

Independent contractors were on site performing a well cleaning to re-establish the flow of Well # 1-12 This work is being performed for Republic Services as due diligence for the eventual purchase of the EGT treatment and disposal facility. The contractor requested that the annulus pressure be reduced from the 842 psi so that damage to the well would not occur. EGT reduced the pressure on the annulus to 186 psi, and, informed the contractor that the minimum differential pressure was only allowed to go down to 100 psi.

The minimum annulus differential pressure was stable for a period, however, once nitrogen was put into the injection line to remove scale, the cold nitrogen caused the injection line to contract and the differential pressure to decrease. The differential pressure went from about 180 psi to -6 to -12 psi. Once the nitrogen injection was completed, the temperature returned to normal and the differential pressure came back to 168 psi.

This written report is hereby timely submitted [within five (5) working days of the permittee becoming aware of the circumstance(s)] and in conformance with EGT's UIC Injection Permit # MI-163-1W-C010, Part 1.E.12.d.3 for the occurrence that occurred on 06.26.19 that was verbally reported to Mr. Allan Batka on 06.26.19.

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.

P 734-946-1000 F 734-946-1002 - 28470 Citrin Drive. Romulus, Michigan 48174
www.envgeotech.com

Sincerely,

Richard J. Powals, P.E.
Vice President

cc: J. Frost (EGT)

rjp070119/EGTEPAWell#1WrittenReport070119