

September 30, 2016

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 thirty-fourth Monthly Report in conformance with the requirements of its two EPA UIC permits (#s MI-163-1W-C010 & MI-163-1W-C011).

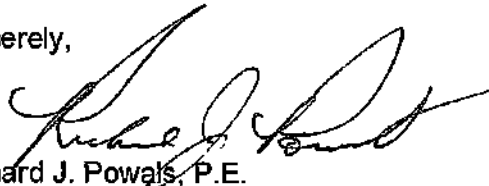
EGT is providing all of the attached information in the same sequence as required by both subject permits, i.e. Part II.D.1 (a – i), Part III, Attachment A, and Part III, Attachment E.G.2 & E.I.

EGT also hereby timely submits its fifteenth Injection Fluid Analyses (for August, 2016) identified on both Pages A-3 of 3 also in conformance with EGT's two EPA UIC permits with the attached "Data Summary Sheet" from a contract laboratory, Ann Arbor Technical Services, Inc., and, those results demonstrate compliance with all of the limits for each of the chemical entities ("Names) identified on Page A-3 of 3 for F039 waste which EGT accepted in April.

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), T. Athans (EGT), P.Sullivan (EGT)

att.

rjp093016/EGTEPAMonthlyReport-August, 2016

AVERAGE INJECTION RATE

Calculation of Average Injection Rate

CURRENT REPORTING YEAR 2016

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
MI-163-1W-C010, Well #1-12			
Current Month	98,503	0	98,503
Since facility first injected			5,961,267
MI-163-1W-C011, Well #2-12			
Current Month	369,235	0	369,235
Since facility first injected			3,898,891
		Lifetime Combined	9,860,158

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 33

33 lifetime number of months of injection × 43,830 minutes/month
= 1,446,390 minutes of injection

Lifetime combined injected volume 9,860,158 ÷ 1,446,390 minutes of injection
= 6.8 gpm average injection rate

WELL 1 DATA

WELL 01 Mo y 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)
8/1/2016	-5.2	91.0	24.8	25.1	958.0	1142.2	0.3	8.6	8.5	160.8	941.4	1098.5
8/2/2016	-9.9	90.4	24.9	25.1	985.7	1158.4	-5.8	8.6	9.4	173.3	951.8	1119.5
8/3/2016	-8.6	-0.7	24.9	25.2	963.7	998.6	-5.7	9.3	0.0	0.0	964.6	1007.2
8/4/2016	-1.4	472.8	24.9	26.9	899.6	1200.1	-5.7	8.6	5.4	111.9	566.8	984.6
8/5/2016	1.4	319.0	24.9	27.2	899.8	1200.1	-2.1	14.9	10.2	68.9	616.1	999.5
8/6/2016	-0.7	2.0	25.1	25.4	933.8	959.0	-3.7	8.6	0.0	0.0	933.8	957.5
8/7/2016	-1.4	0.0	25.1	25.5	925.5	933.8	0.7	8.6	0.0	0.0	926.5	934.5
8/8/2016	-1.6	392.2	25.1	25.4	922.6	1073.0	1.4	6.6	4.2	72.5	669.9	961.8
8/9/2016	-1.5	370.4	25.1	25.5	922.5	1090.1	1.7	7.2	17.5	58.1	690.7	960.2
8/10/2016	-1.6	129.7	25.1	25.6	950.2	973.0	4.6	10.6	1.3	3.4	828.3	959.5
8/11/2016	-9.8	581.3	25.3	27.8	889.9	1201.0	-1.9	7.9	17.7	166.8	431.5	1019.3
8/12/2016	-10.0	476.9	24.8	27.7	898.8	1201.9	-0.6	5.6	12.3	151.8	573.0	1066.4
8/13/2016	-1.6	-0.7	25.0	25.3	945.9	983.7	-0.9	1.4	0.0	0.0	946.9	985.1
8/14/2016	-1.6	-0.6	25.0	25.3	934.0	946.0	0.4	0.7	0.0	0.0	934.7	947.4
8/15/2016	-1.6	-0.7	25.0	25.3	929.1	934.1	0.4	1.1	0.0	0.0	930.1	935.4
8/16/2016	-1.5	-0.6	25.0	25.3	924.0	929.2	-0.4	1.2	0.0	0.0	924.9	930.4
8/17/2016	-1.6	-0.6	25.0	25.3	920.1	924.0	-0.8	2.0	0.0	0.0	920.8	925.3
8/18/2016	-1.6	-0.6	25.0	25.3	917.6	920.2	-0.3	1.8	0.0	0.0	918.5	921.7
8/19/2016	-1.6	-0.6	25.0	25.4	914.8	918.8	0.1	1.8	0.0	0.0	915.7	920.2
8/20/2016	-1.6	-0.6	25.0	25.4	910.1	914.8	0.9	1.3	0.0	0.0	911.1	916.1
8/21/2016	-1.5	-0.6	25.0	25.4	906.1	910.2	0.8	1.2	0.0	0.0	907.0	911.4
8/22/2016	-1.6	-0.6	25.0	25.4	904.8	908.9	0.3	1.5	0.0	0.0	905.6	910.2
8/23/2016	-1.5	-0.5	25.0	25.3	902.6	906.0	-0.7	0.9	0.0	0.0	903.3	907.1
8/24/2016	-1.6	-0.7	25.0	25.4	900.9	904.0	-0.2	0.9	0.0	0.0	901.7	905.4
8/25/2016	-1.6	-0.6	24.5	25.4	900.0	1005.1	0.7	1.4	0.0	0.0	900.9	1006.3
8/26/2016	-1.6	-0.6	24.5	24.8	992.6	996.5	0.7	1.6	0.0	0.0	993.6	997.7
8/27/2016	-1.6	-0.6	24.6	24.8	986.9	992.7	1.1	1.3	0.0	6.4	987.6	993.9
8/28/2016	-1.6	-0.6	24.6	24.8	983.2	987.0	1.2	1.3	0.0	0.0	984.1	988.3
8/29/2016	-1.6	-0.6	24.6	24.8	980.4	983.4	1.1	1.7	0.0	0.0	981.1	984.9
8/30/2016	-1.6	-0.6	24.6	24.9	976.6	980.5	0.4	2.4	0.0	0.0	977.5	981.8
8/31/2016	-1.6	-0.6	24.6	24.9	973.2	976.7	1.1	1.6	0.0	0.0	974.0	977.9

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 x 30)

Channel #2

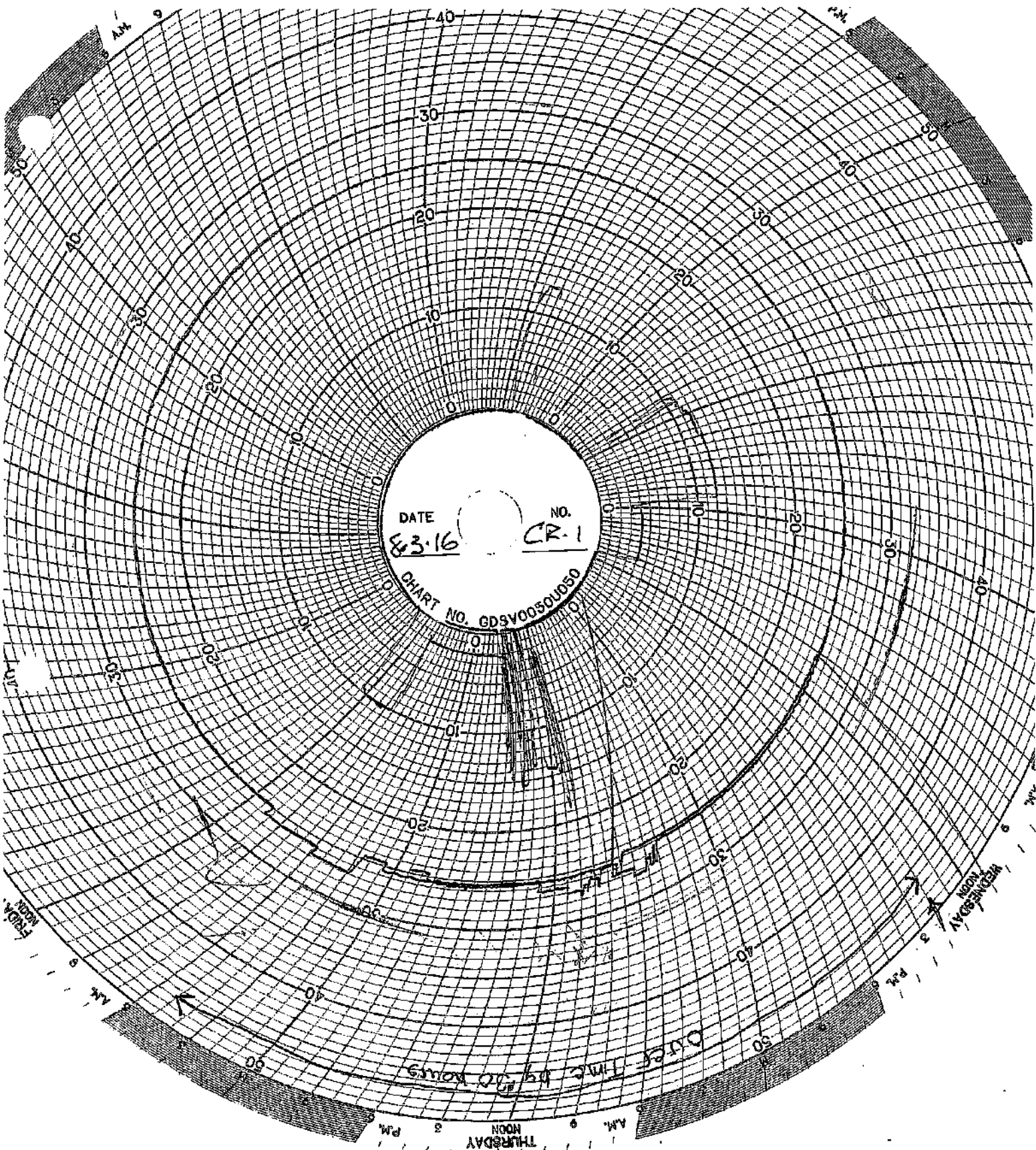
Red Pen – Well 1 Monthly Volume (chart value x 30)

Channel #3

Green Pen – Well 2 Monthly Volume (chart value x 4)

Channel #4

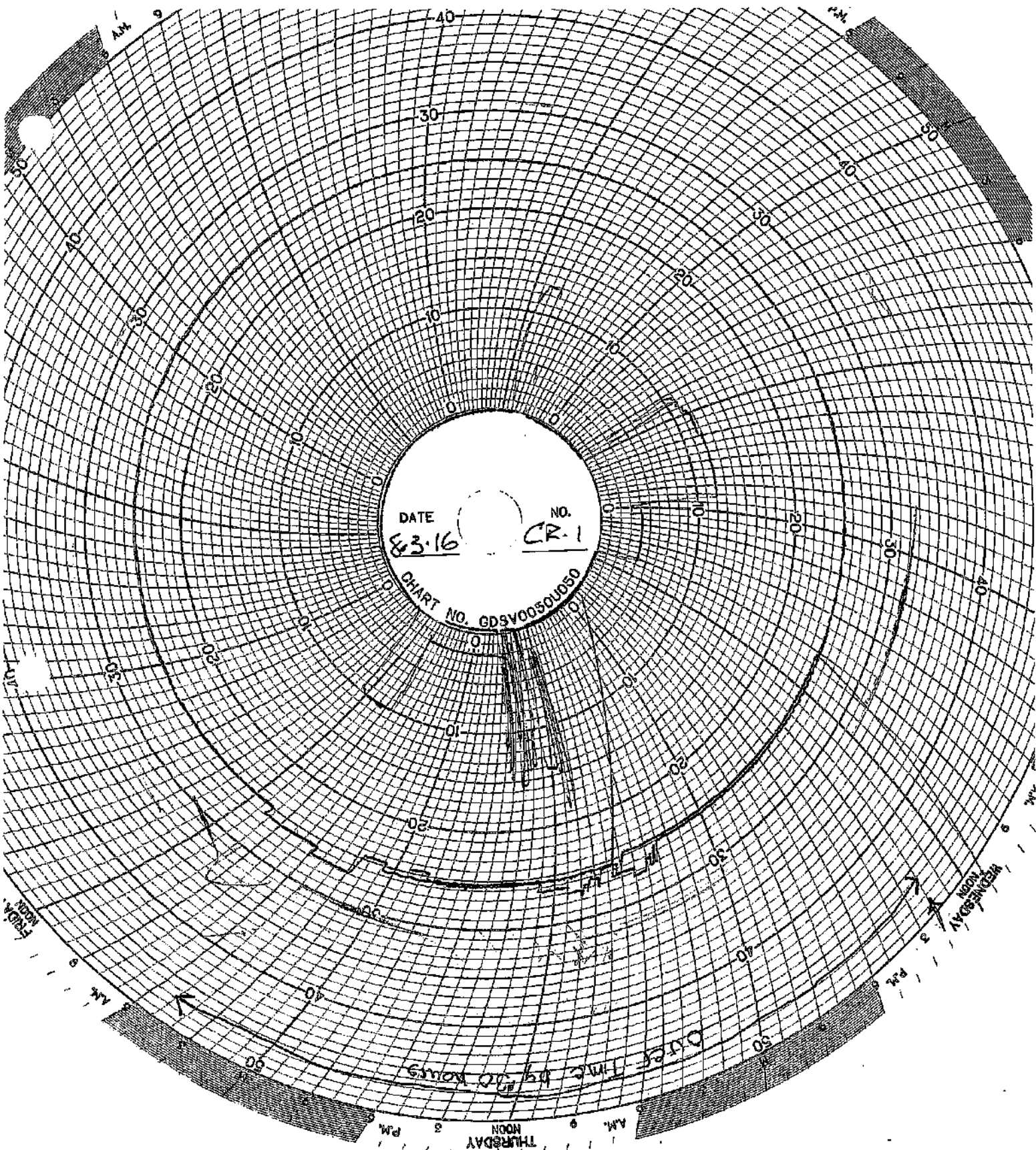
Black Pen – Temperature (chart value x 0)



DATE 8-3-16 NO. CR-1

CHART NO. GDSV0050050

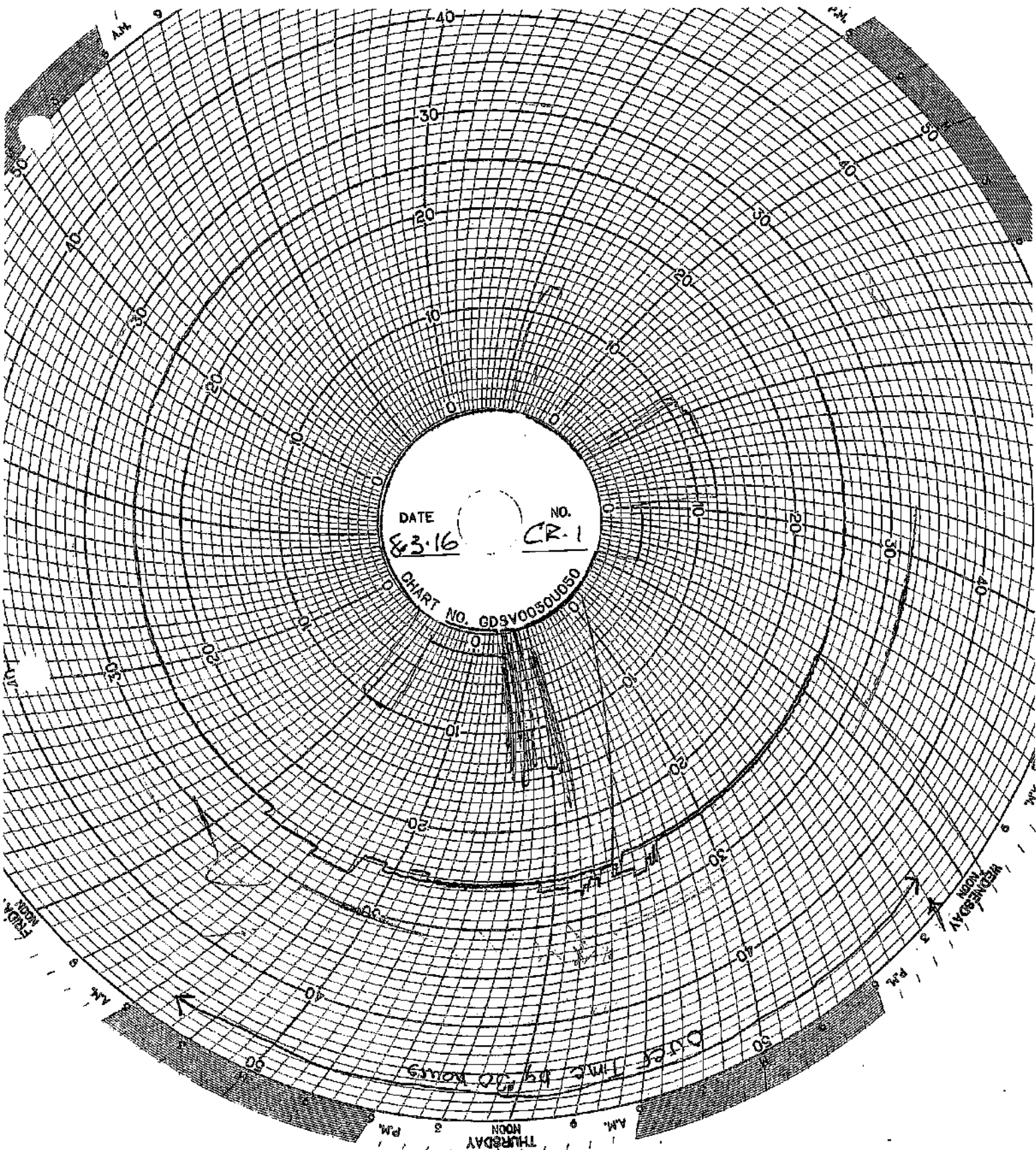
Over time by 30 hours



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CHART NO. GDSV0050050

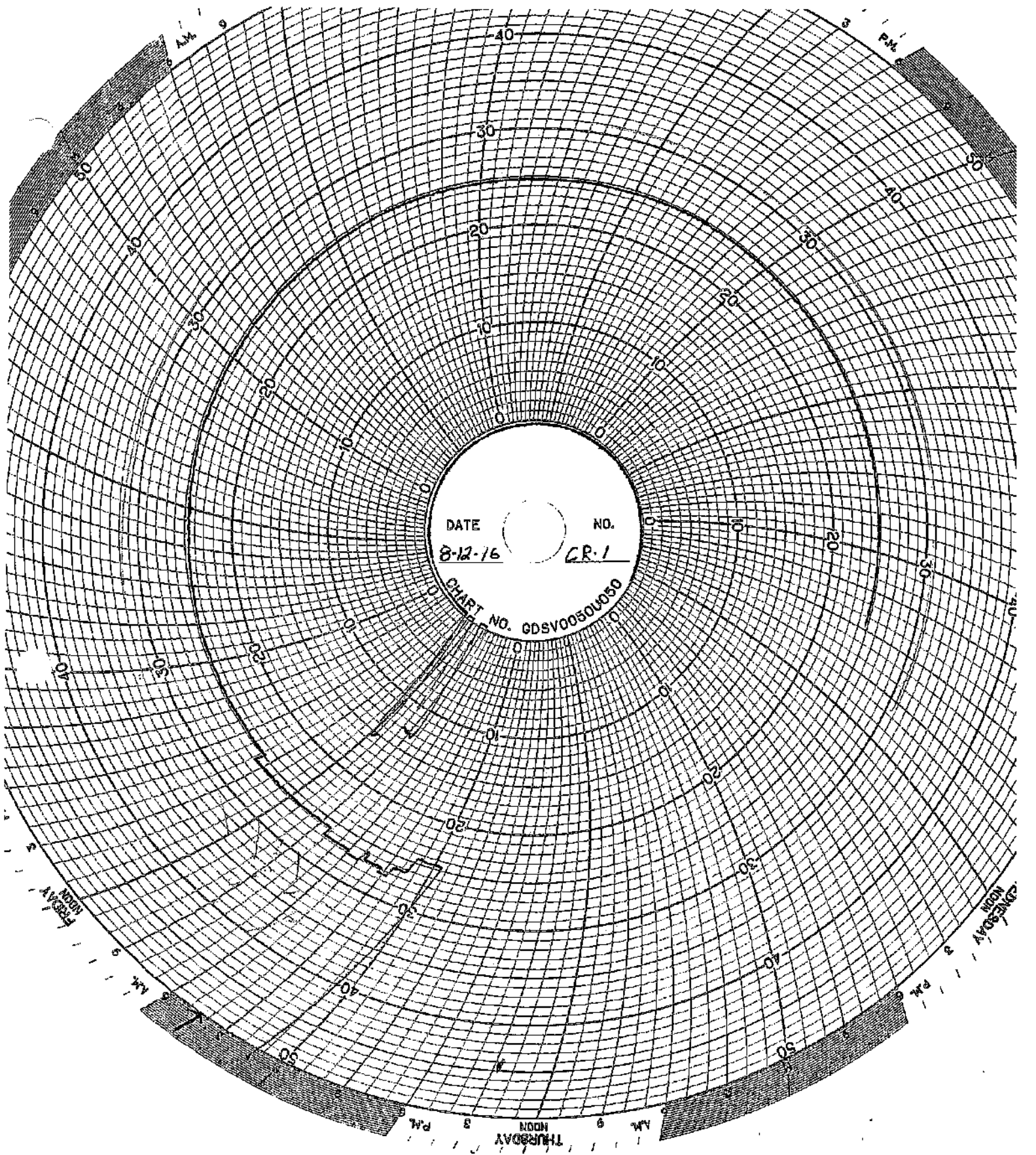
Over time by 30 hours



DATE 8-3-16 NO. CR-1

CHART NO. GDSV0050050

Over time by 30 hours



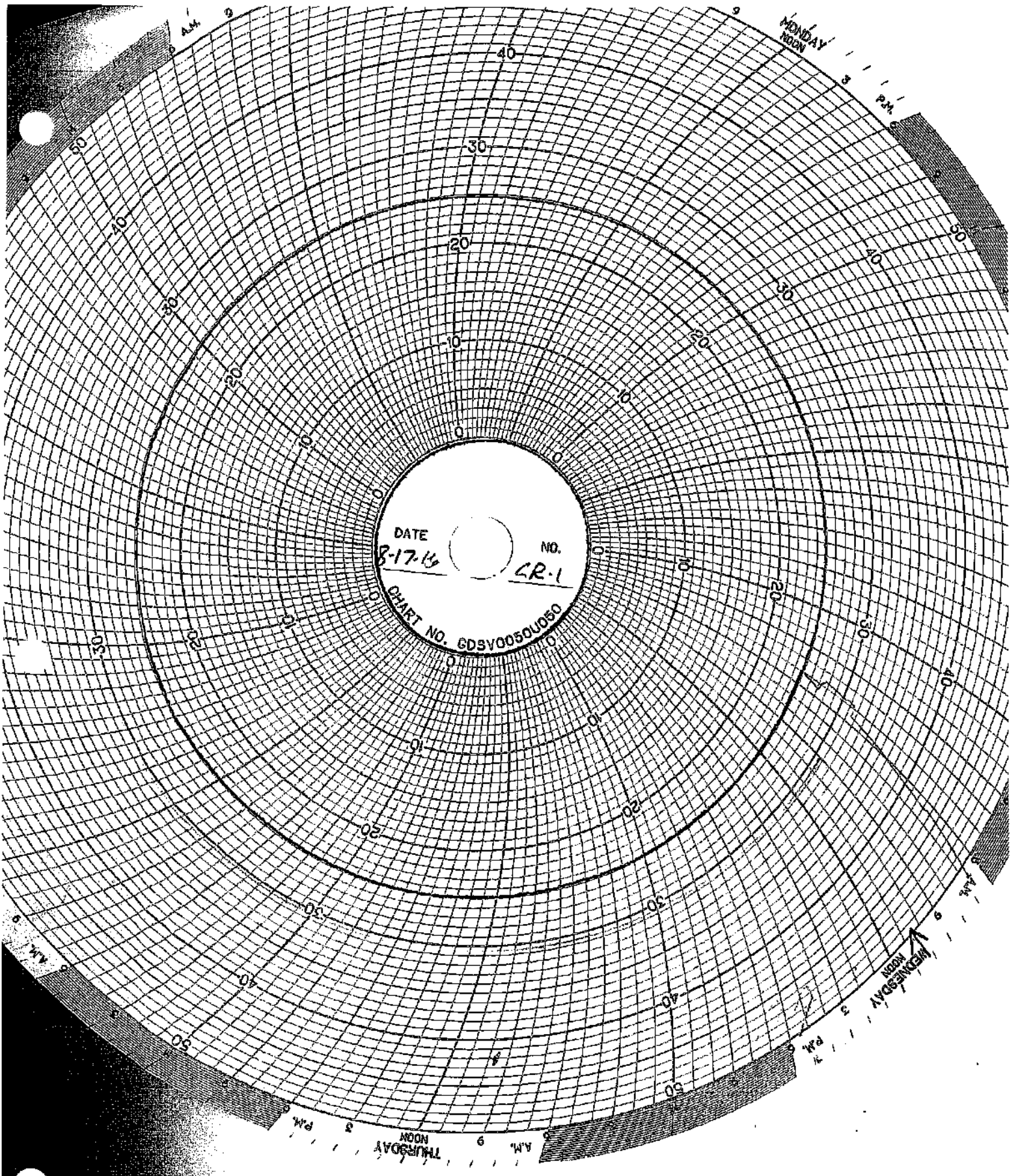
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CHART NO. GDSV0050U050

MONDAY
AUGUST 1

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AUGUST 1

THURSDAY
AUGUST 3

THURSDAY
AUGUST 3



DATE 8-17-14 NO. CR-1
CHART NO. GDSV0050U050

MONDAY
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MONDAY
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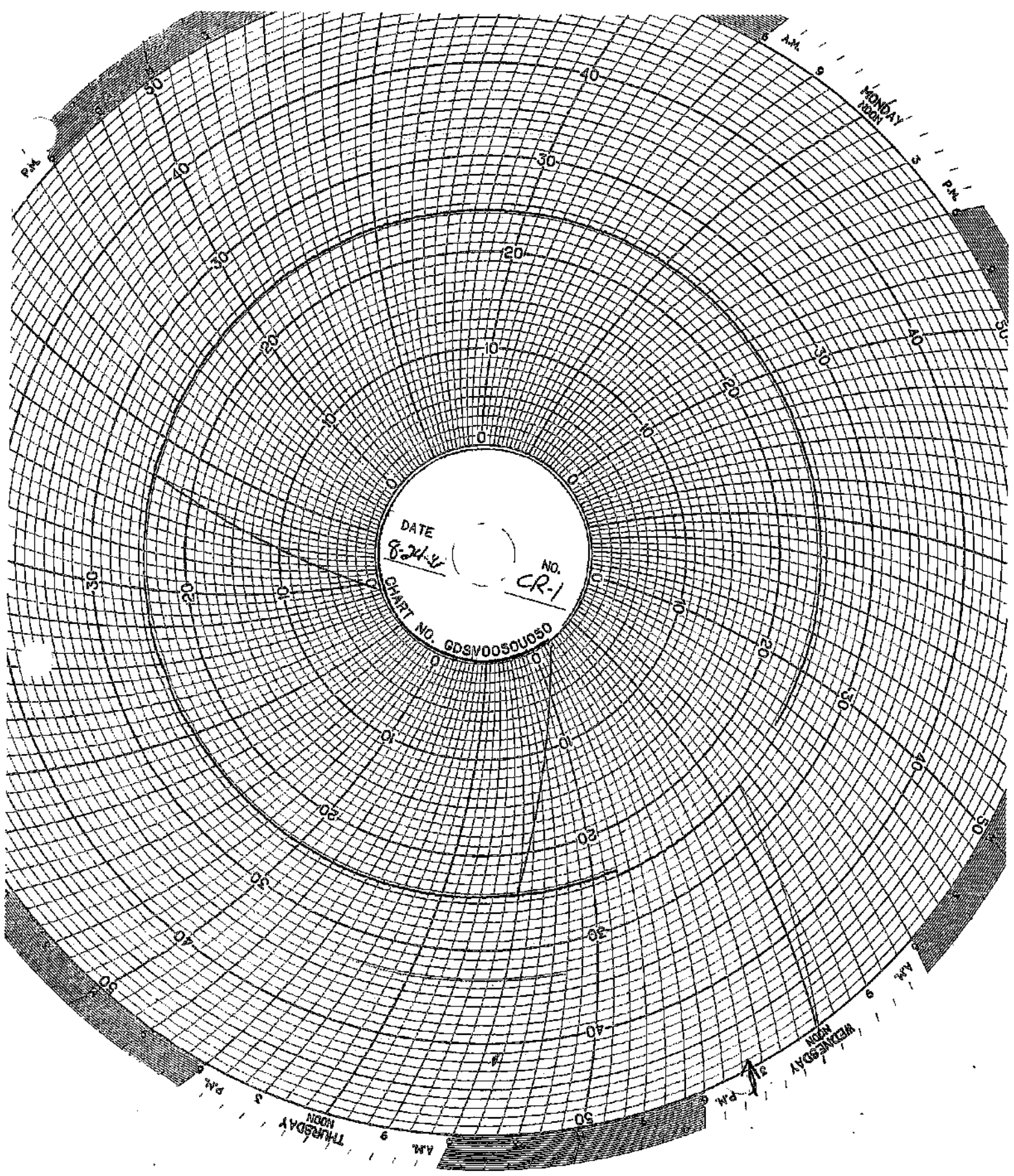
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DATE 8-24-44
CHART NO. GDSV0050U050
NO. CR-1

MONDAY
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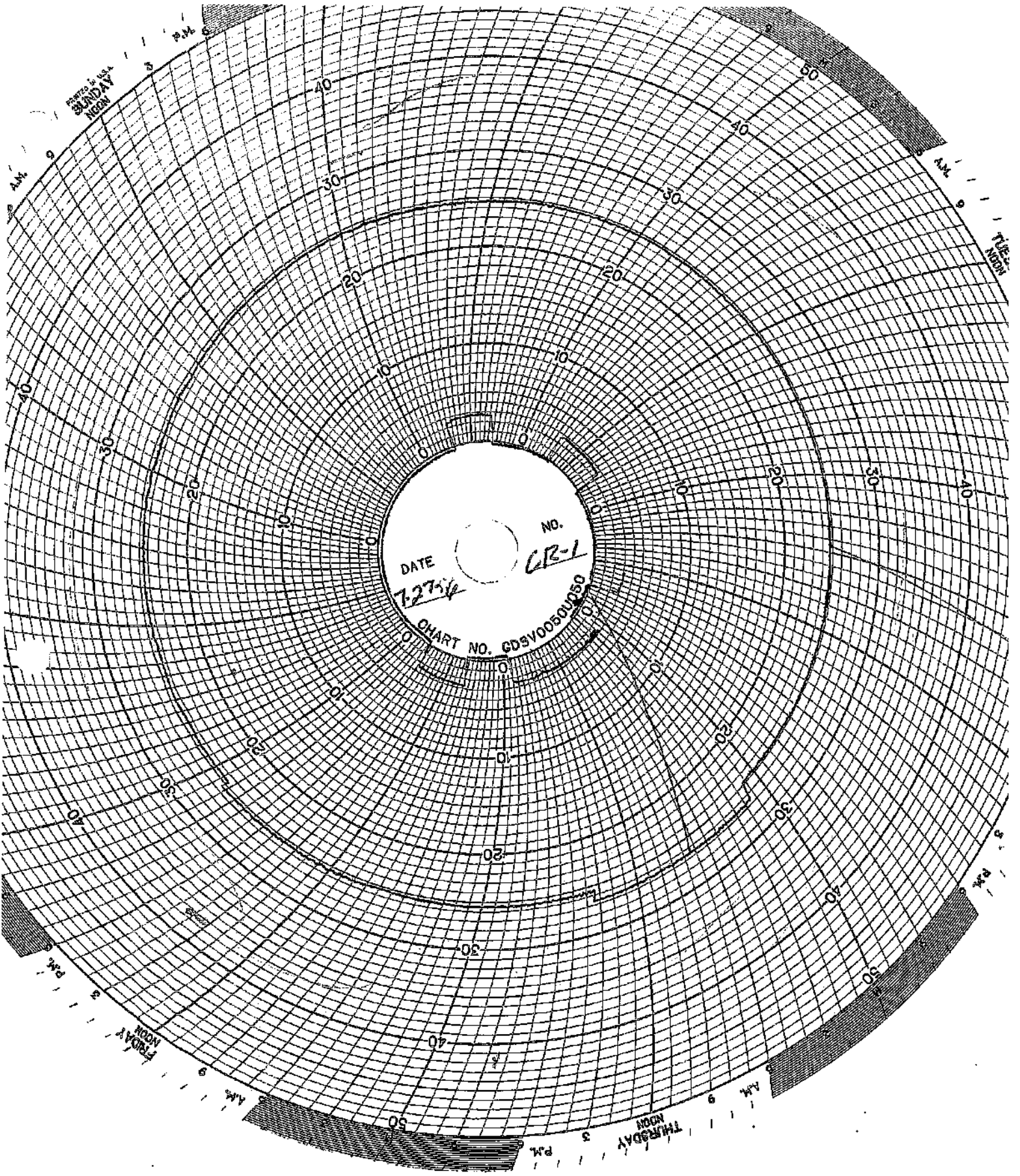
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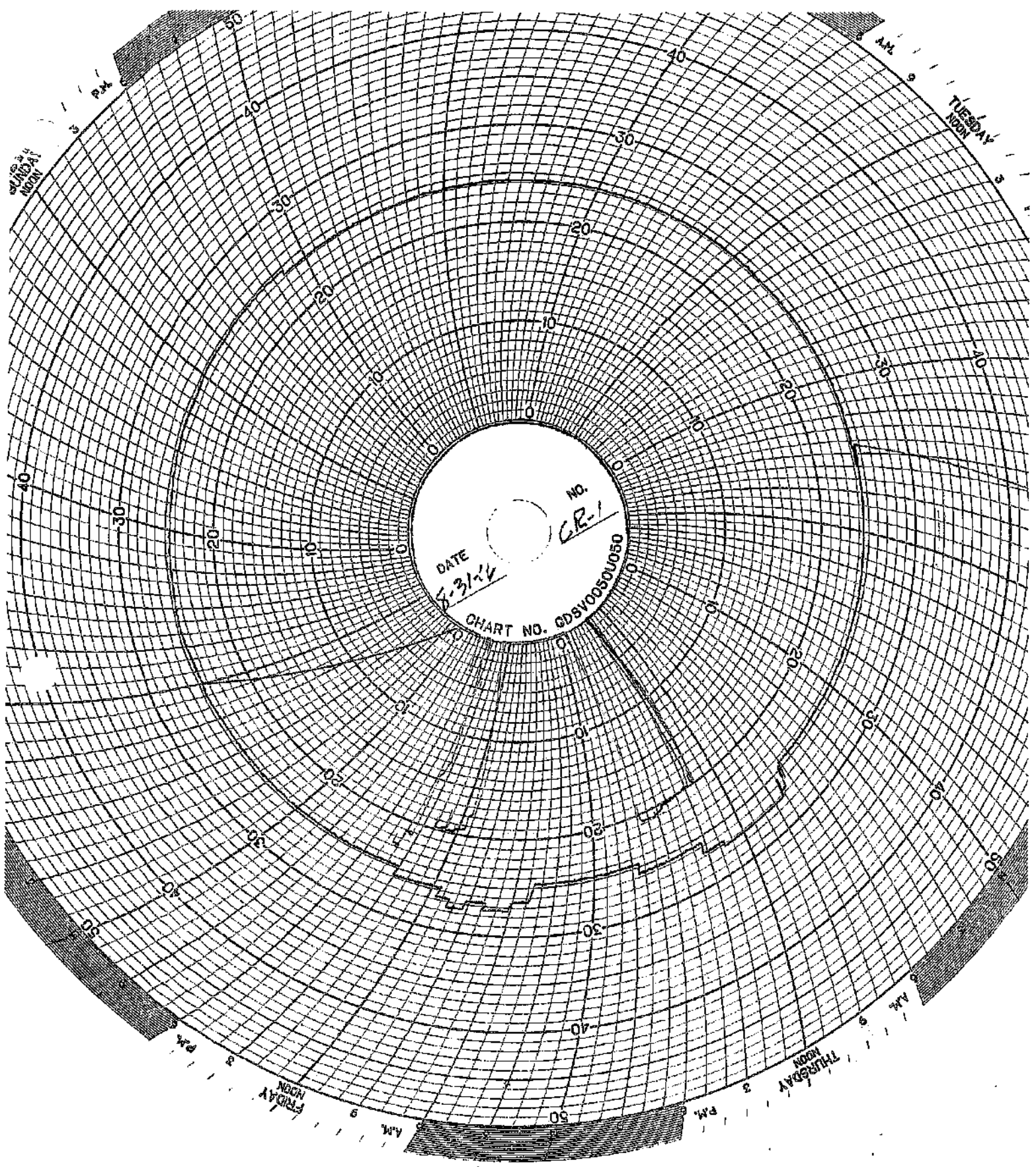
STARTS AT 12:00
SUNDAY
NOON

ENDS AT 12:00
MONDAY
NOON

DATE 7-27-54
No. CR-1
CHART NO. 653V00500253

STARTS AT 12:00
FRIDAY
NOON

ENDS AT 12:00
THURSDAY
NOON



DATE 8-31-66
No. CR-1
CHART NO. 0DSV0050U050

MONDAY
A.M.
P.M.

TUESDAY
A.M.
P.M.

WEDNESDAY
A.M.
P.M.

THURSDAY
A.M.
P.M.

FRIDAY
A.M.
P.M.

SATURDAY
A.M.
P.M.

SUNDAY
A.M.
P.M.

WELL 2 DATA

Well 02 Mo y 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)
8/1/2016	-8.7	90.4	26.8	27.3	333.1	576.5	0.3	8.6	7.2	131.7	317.2	536.7
8/2/2016	-9.7	89.4	26.8	27.3	391.3	603.7	-5.8	8.6	6.5	23.9	356.8	568.9
8/3/2016	-9.9	-1.4	26.8	27.3	345.5	405.3	-5.7	9.3	0.0	22.3	347.5	414.9
8/4/2016	-2.3	471.9	25.6	27.3	338.2	873.3	-5.7	8.6	4.0	83.6	201.4	631.3
8/5/2016	-2.1	315.6	25.5	26.2	629.0	972.8	-2.1	14.9	6.7	43.4	458.0	796.3
8/6/2016	-3.8	-2.0	25.0	26.1	600.0	705.1	-3.7	8.6	0.0	0.0	602.7	707.3
8/7/2016	-4.4	-3.3	24.9	25.6	670.2	686.2	0.7	8.6	0.0	0.0	674.5	690.0
8/8/2016	-5.0	396.8	25.0	25.6	664.4	845.9	1.4	6.6	2.9	105.4	278.4	741.2
8/9/2016	-2.1	369.2	25.1	27.5	365.9	717.1	1.7	7.2	0.0	5.8	55.9	719.2
8/10/2016	-2.9	401.0	25.5	25.9	592.1	839.0	4.6	10.6	15.8	46.0	339.3	606.6
8/11/2016	-10.0	581.7	24.3	29.5	297.0	1200.2	-1.9	7.9	11.6	124.4	307.0	1026.2
8/12/2016	-10.0	563.8	24.1	29.1	300.1	1200.5	-0.6	5.6	29.6	147.2	278.5	1020.2
8/13/2016	2.3	15.5	26.3	27.6	299.9	408.1	-0.9	1.4	0.0	0.0	287.3	398.8
8/14/2016	-0.6	2.4	26.3	26.8	342.0	366.6	0.4	0.7	0.0	0.0	342.5	364.3
8/15/2016	-10.0	706.3	23.9	29.2	299.8	1217.1	0.4	1.1	18.6	191.6	309.7	913.1
8/16/2016	-8.3	608.6	25.0	28.1	299.8	1202.9	-0.4	1.2	13.2	115.9	286.5	788.4
8/17/2016	-10.0	652.5	24.5	28.8	299.8	1200.2	-0.8	2.0	9.9	343.5	154.7	837.1
8/18/2016	-9.1	672.6	24.1	29.4	299.8	1199.8	-0.3	1.8	31.6	391.7	148.1	820.0
8/19/2016	-10.0	650.8	25.1	28.1	300.3	1199.7	0.1	1.8	21.2	174.5	149.5	892.0
8/20/2016	-2.8	-2.1	26.3	27.1	300.1	403.8	0.9	1.3	0.0	0.0	302.6	406.4
8/21/2016	-3.0	-2.1	26.3	26.9	309.1	325.8	0.8	1.2	0.0	2.5	311.7	328.4
8/22/2016	-10.0	623.2	24.8	28.8	299.9	1199.9	0.3	1.5	32.3	151.7	169.5	878.6
8/23/2016	-1.8	672.3	24.4	26.7	307.1	1171.6	-0.7	0.9	4.2	126.6	144.7	836.1
8/24/2016	-3.8	661.1	24.5	27.8	307.6	1200.3	-0.2	0.9	18.1	184.7	310.8	883.3
8/25/2016	-10.0	665.2	23.7	26.7	300.1	1200.3	0.7	1.4	20.6	159.7	169.9	910.0
8/26/2016	-10.0	636.4	23.8	27.2	799.2	1202.7	0.7	1.6	20.2	166.5	343.1	931.8
8/27/2016	-7.9	-5.6	23.3	24.2	800.2	904.6	1.1	1.3	0.0	2.3	807.2	911.3
8/28/2016	-6.2	-5.0	22.9	23.7	800.0	907.3	1.2	1.3	0.0	0.0	805.8	912.8
8/29/2016	-5.5	653.8	23.0	25.6	799.6	1200.0	1.1	1.7	10.8	149.4	353.1	908.7
8/30/2016	-9.0	-0.8	22.5	23.1	799.8	910.6	0.4	2.4	0.0	84.9	801.4	912.1
8/31/2016	-10.0	638.1	22.4	25.1	799.4	1200.4	1.1	1.6	7.1	145.5	361.9	918.3

Circle Chart Index

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

Chart Recorder #1

Channel #1

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

Channel #2

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

Channel #3

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

Channel #4

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

Chart Recorder #2

Channel #1

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

Channel #2

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

Channel #3

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

Channel #4

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

Chart Recorder #3

Channel #1

Blue Pen - Injection pH Well 1 & 2 (chart value x 30)

Channel #2

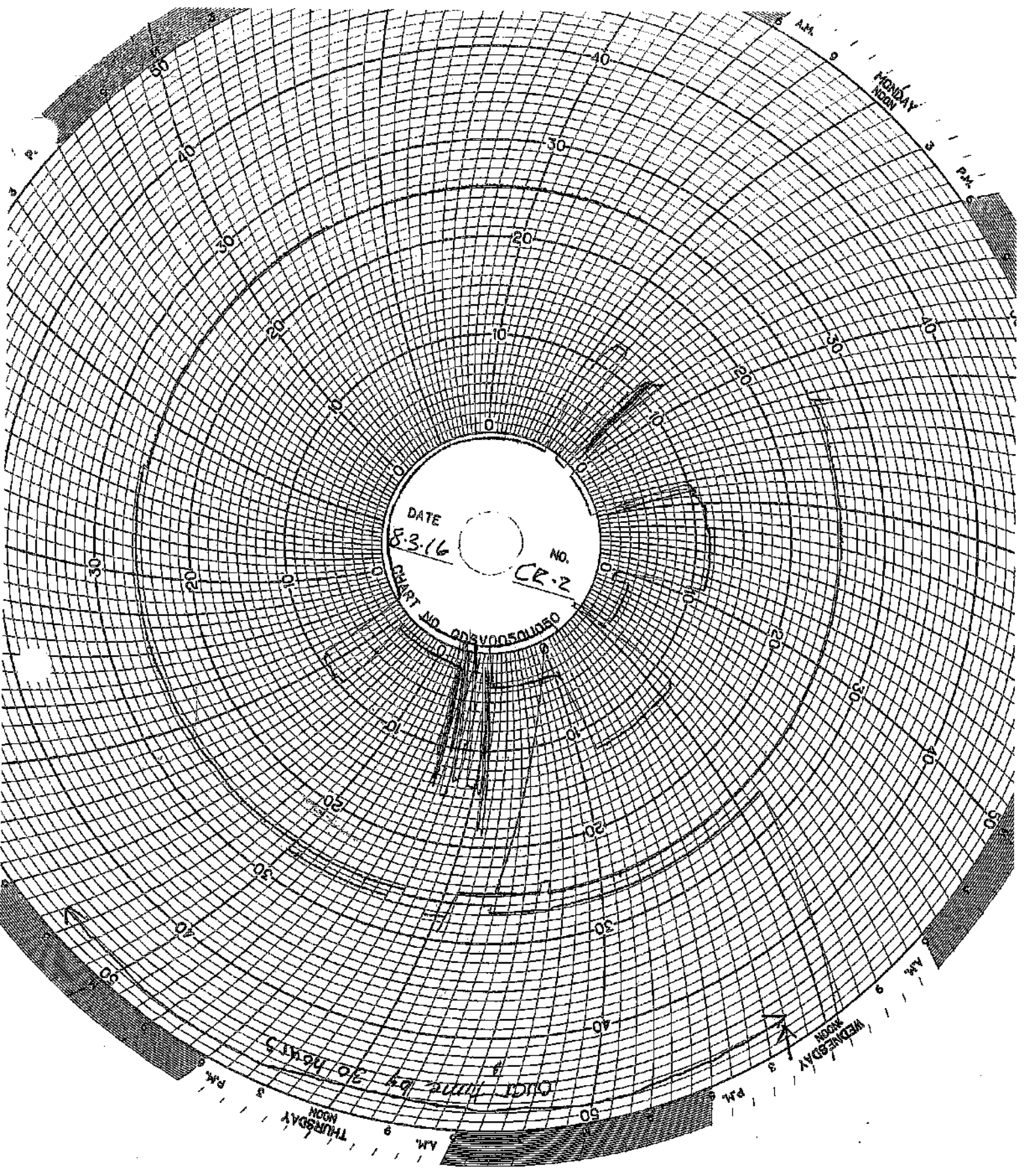
Red Pen - Well 1 Monthly Volume (chart value x 30)

Channel #3

Green Pen - Well 2 Monthly Volume (chart value x 4)

Channel #4

Black Pen - Temperature (chart value x 0)



DATE
8-3-16
NO.
CR-2
CHART NO. 02500501000

MONDAY
NOON

WEDNESDAY
NOON

THURSDAY
NOON

CHART NO. 02500501000

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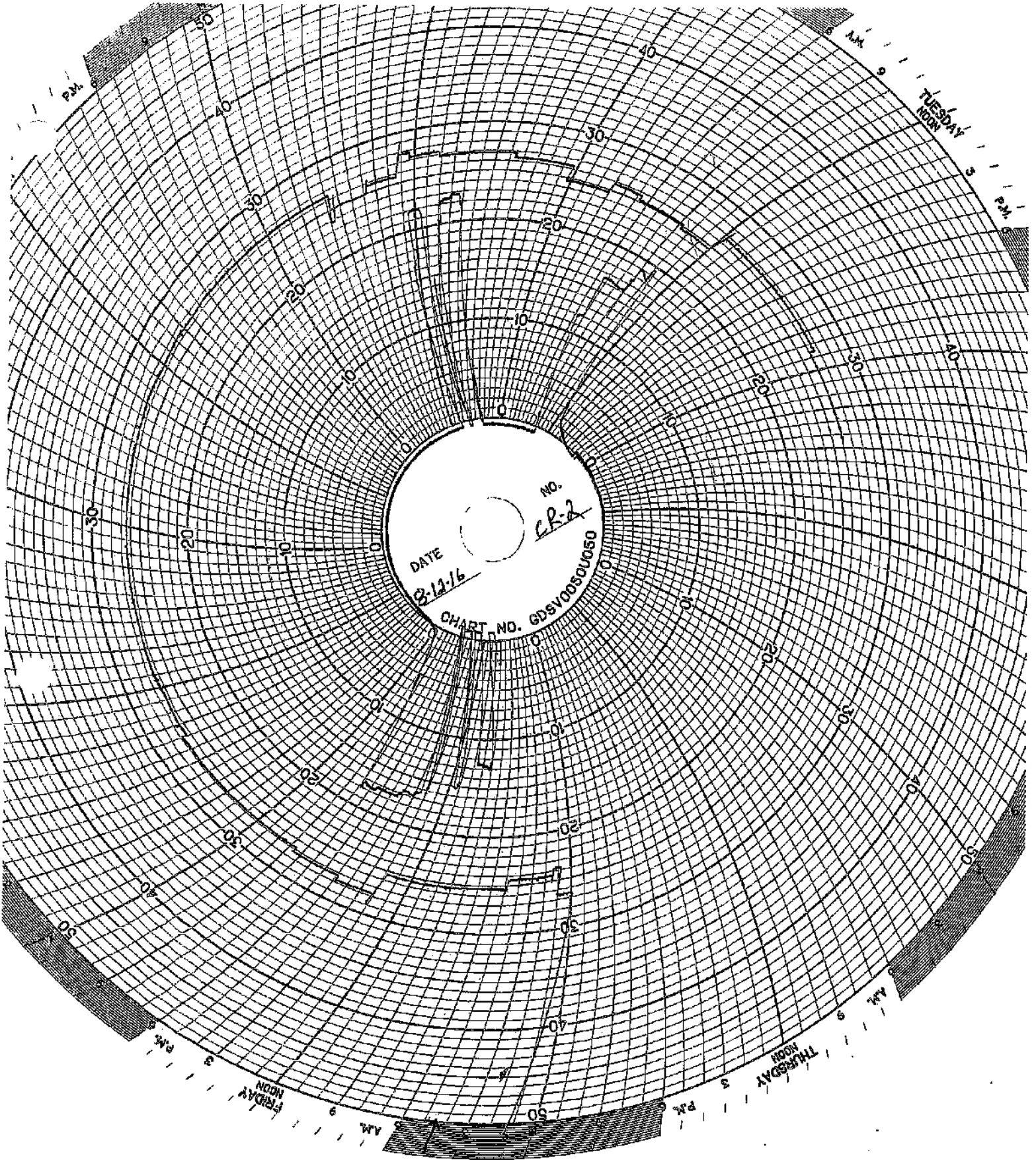
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DATE 8-12-76
No. CR-2
CHART NO. GDSV0050U050

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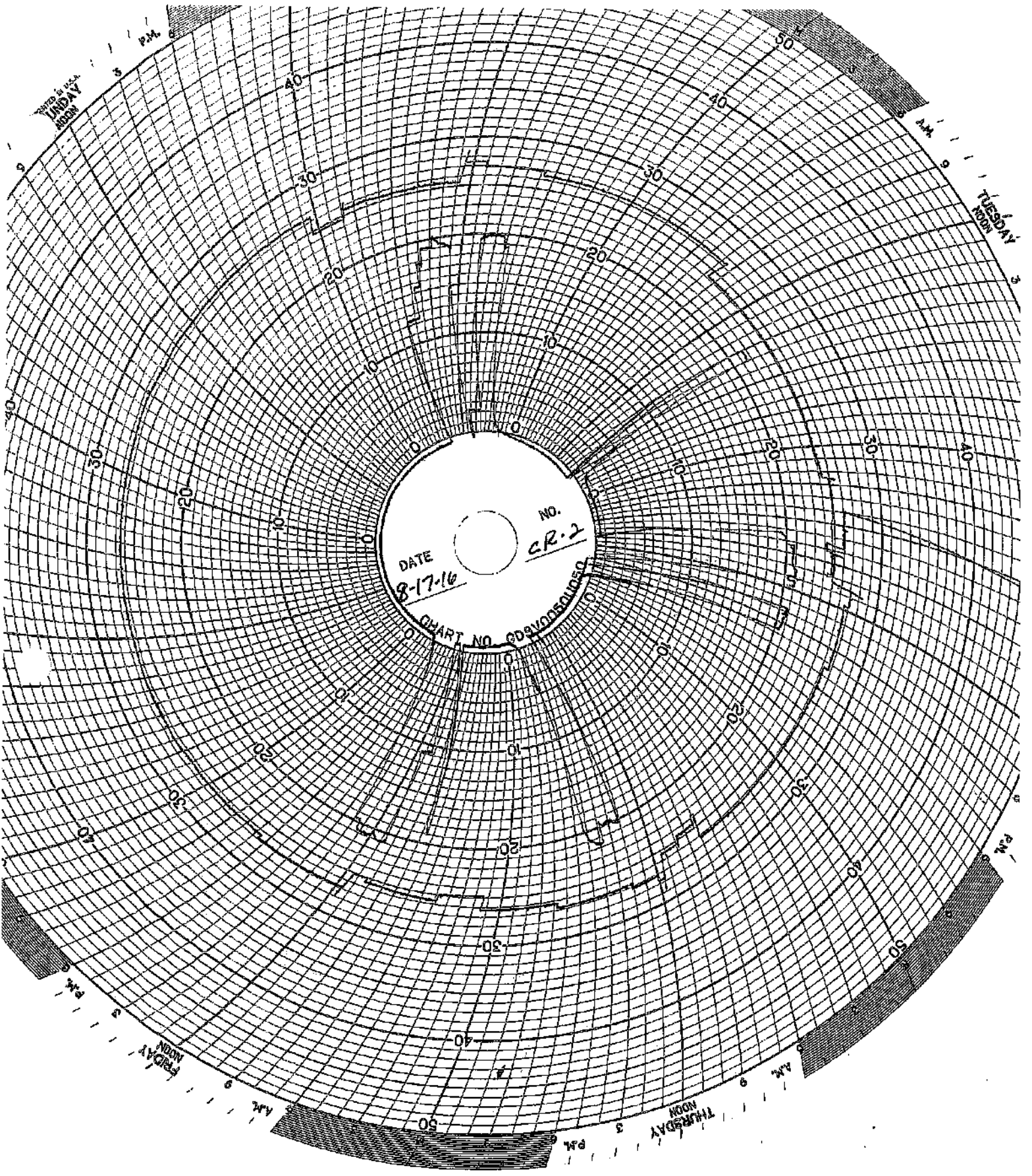
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DATE 8-17-16
No. CR-2
CHART NO. 038503810

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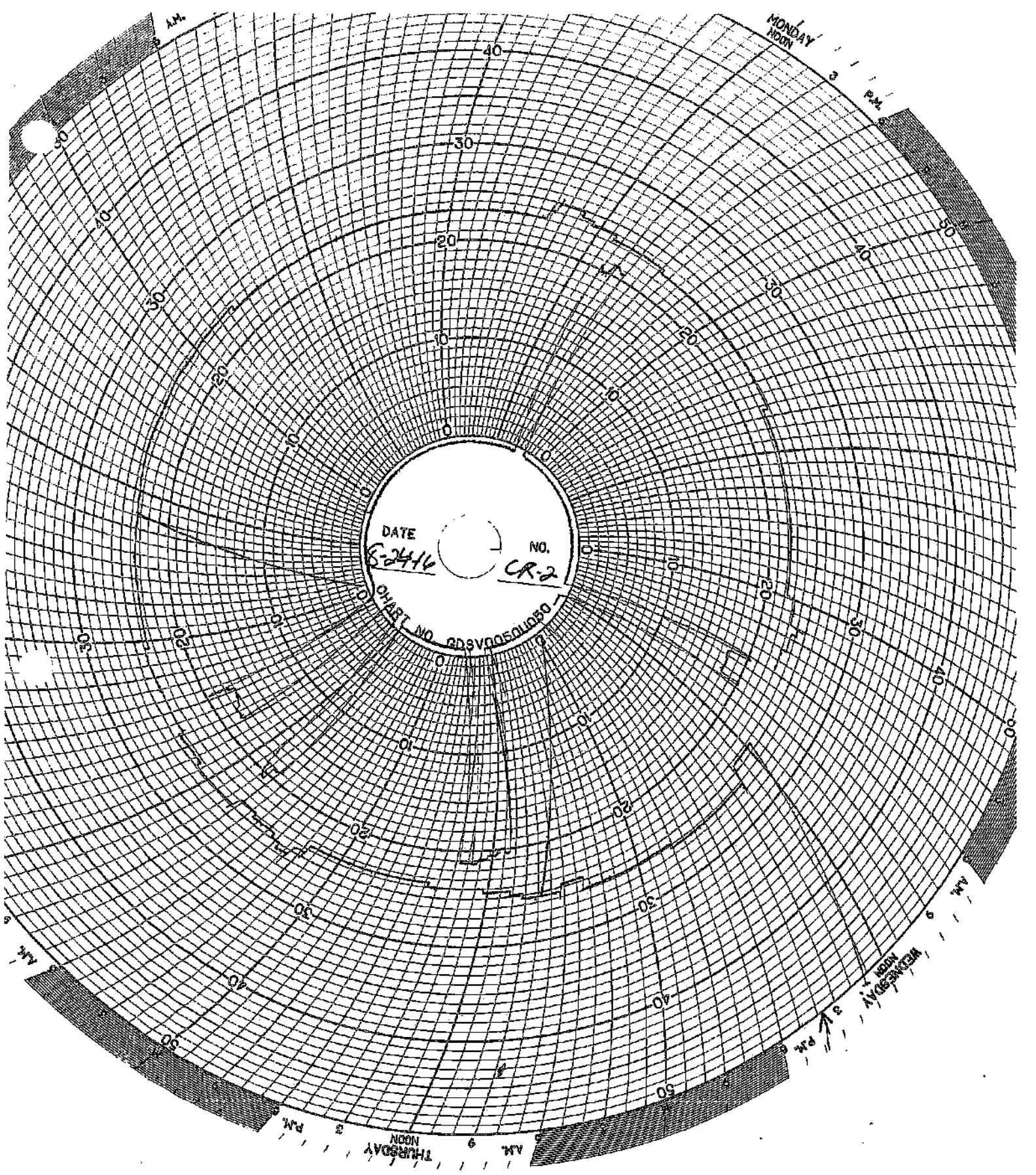
MONDAY 9 AM

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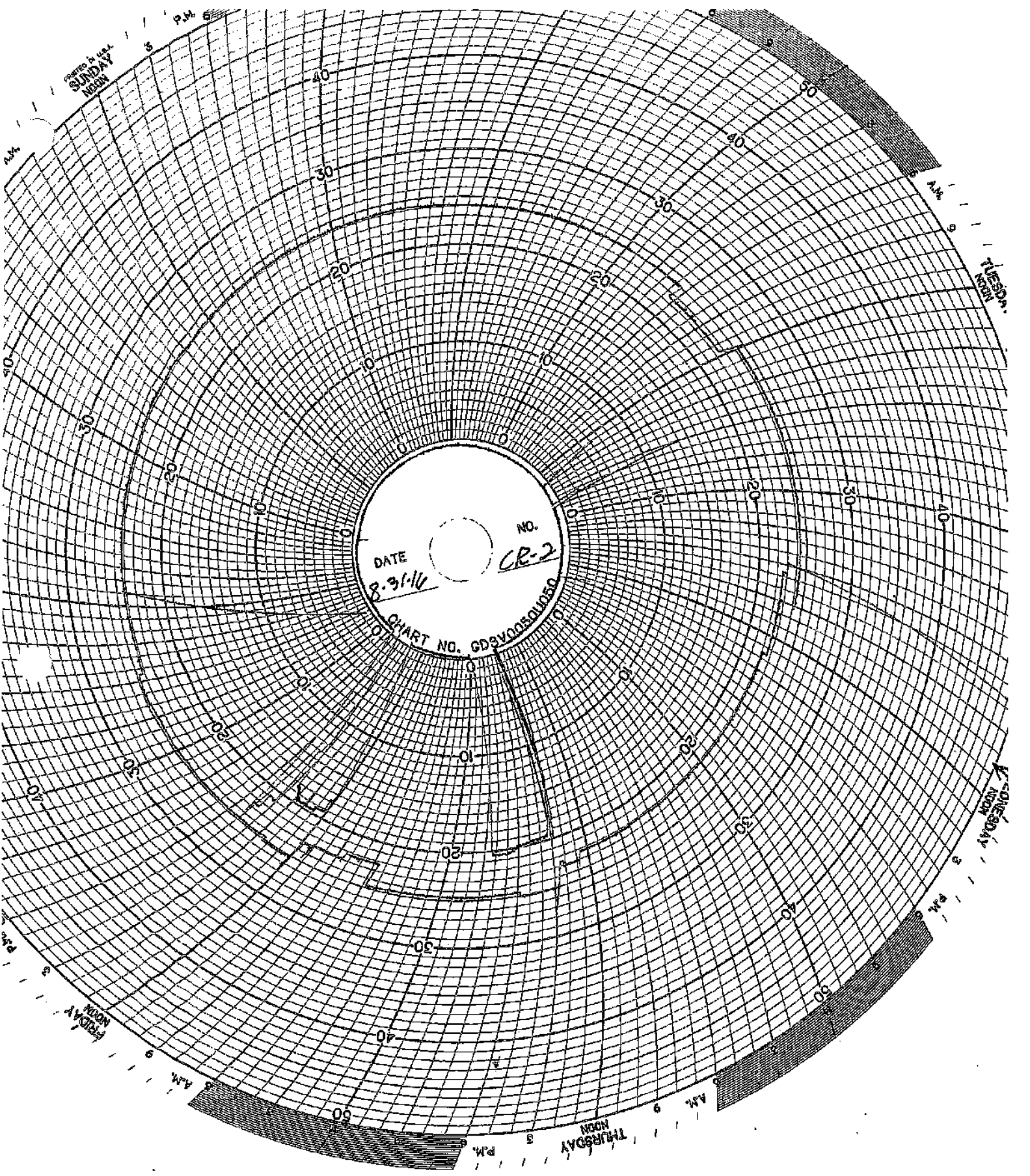
DATE 6-24-16 NO. CR-2
CHART NO. 825V005DU080

MONDAY
NOON 9 AM 3 PM

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THURSDAY
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THURSDAY
NOON 9 AM 3 PM



DATE 8-31-16
NO. CR-2
CHART NO. CDSV00B01050

SUNDAY
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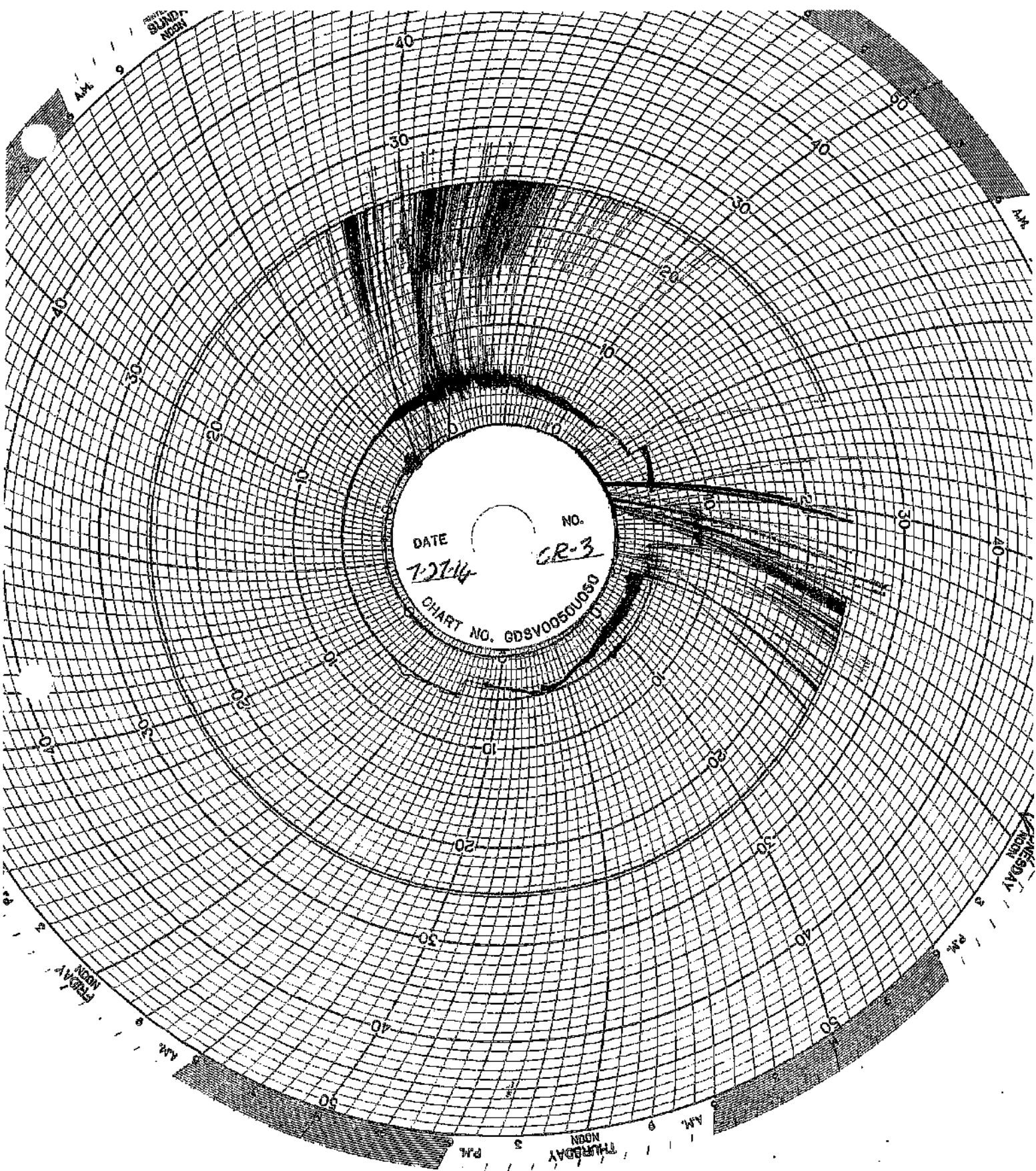
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SUNDAY
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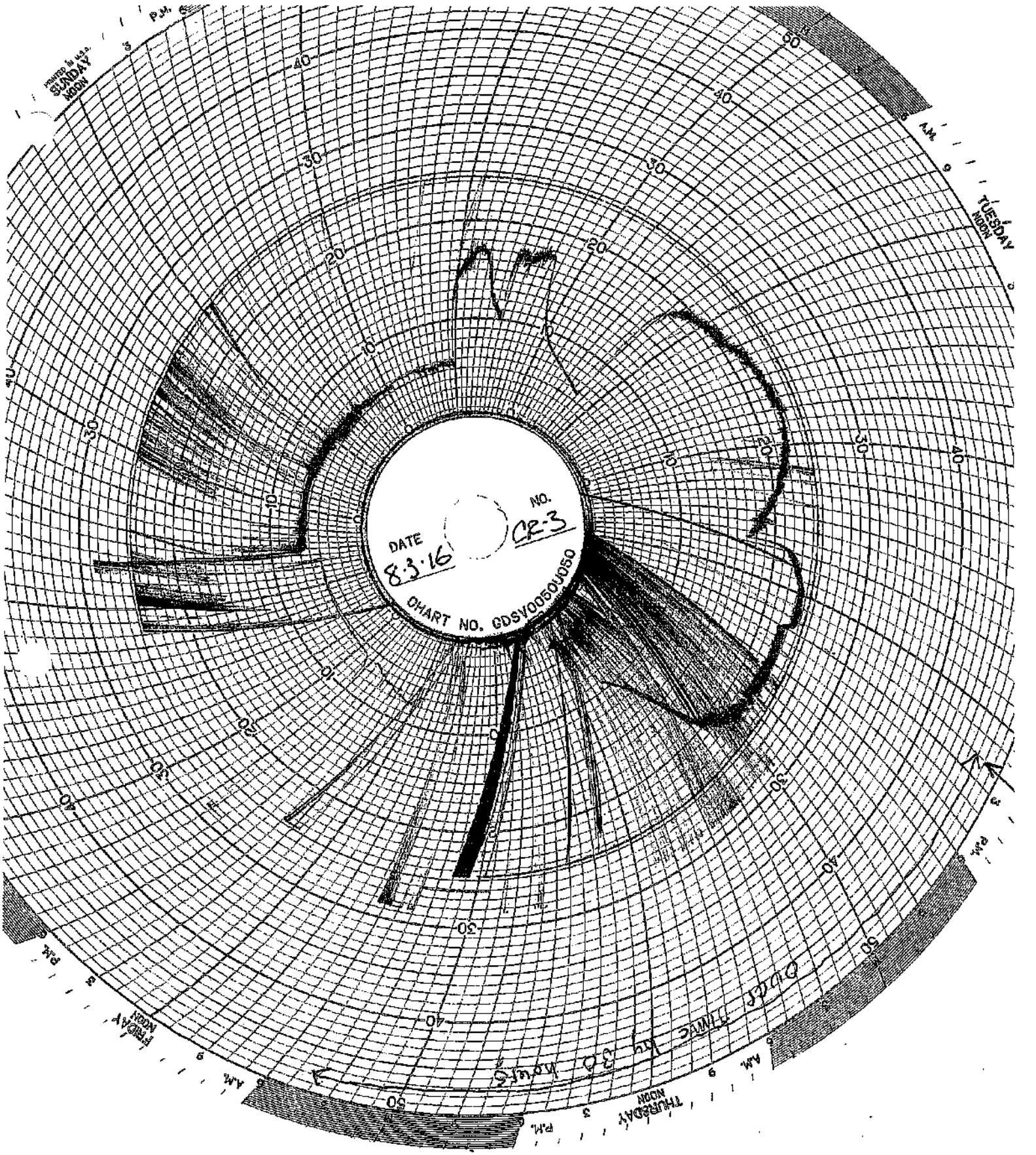
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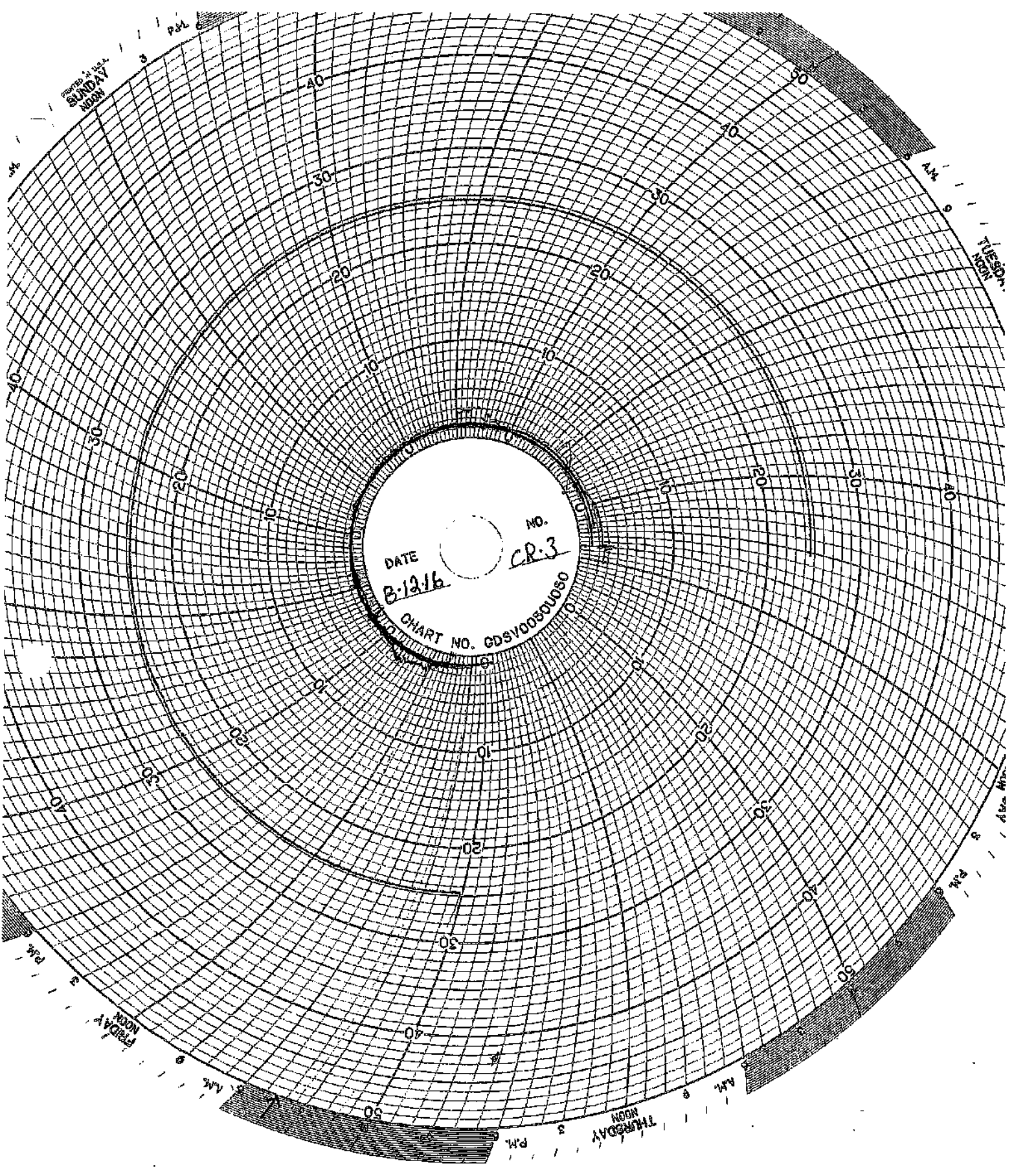
DATE 8.3.16
NO. CR-3
CHART NO. GDSV00501050

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TUESDAY
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THURSDAY
FRIDAY
SATURDAY
SUNDAY

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HOURS



DATE B-12-16
NO. CR-3
CHART NO. GDSV0030U050

SUNDAY
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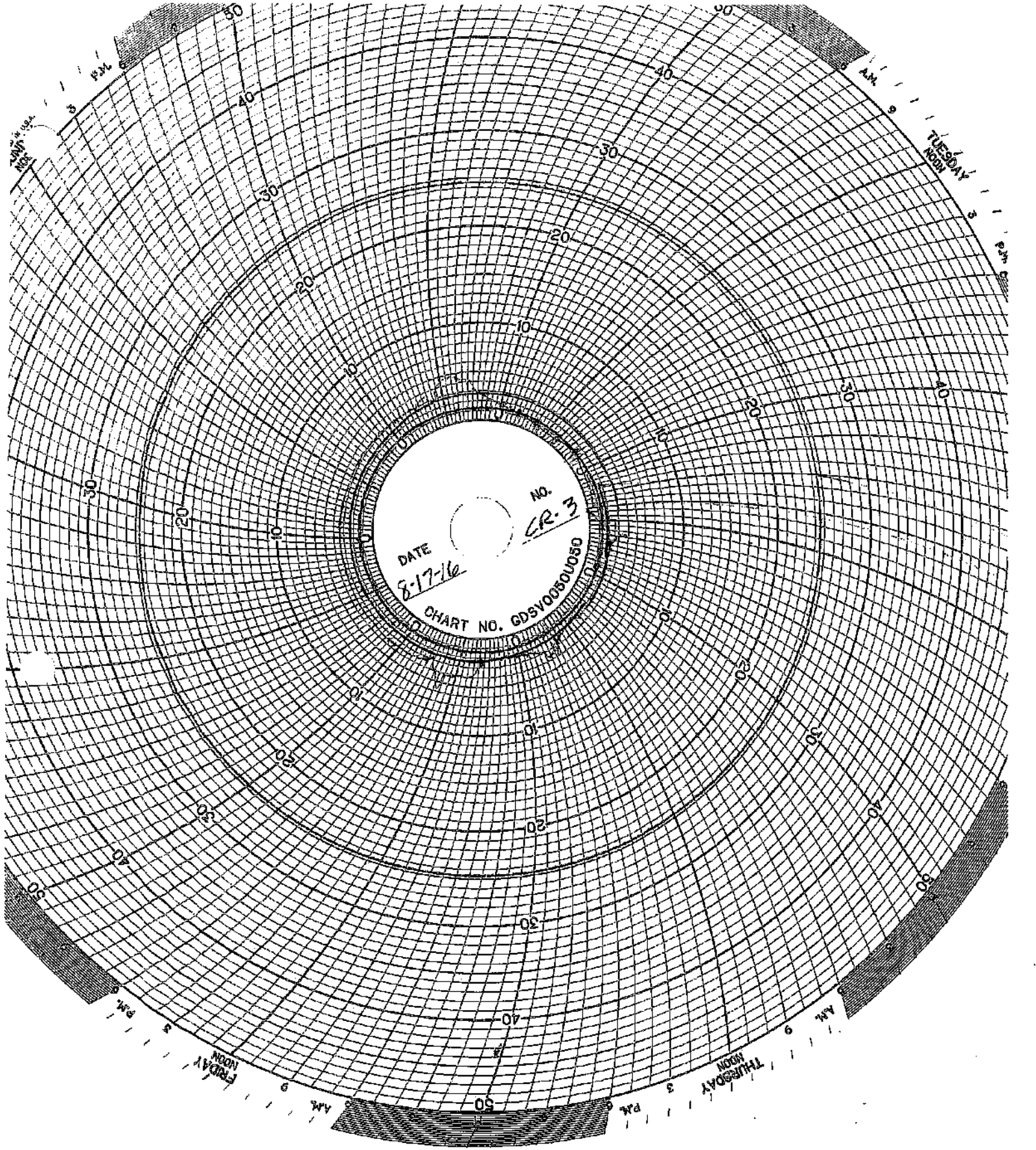
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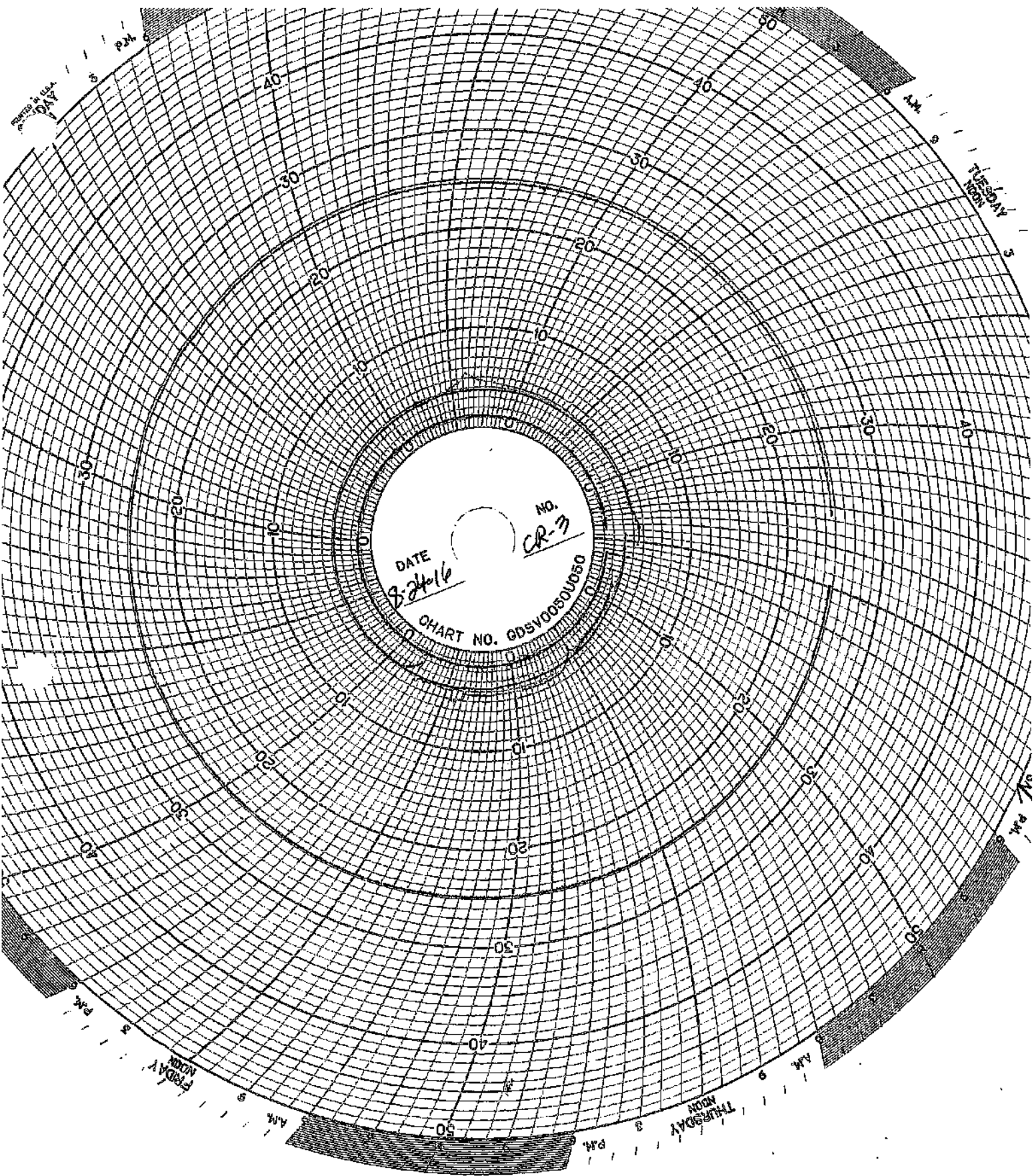


DATE 8-17-16
No. CR-3
CHART NO. GDS100501050

TUESDAY
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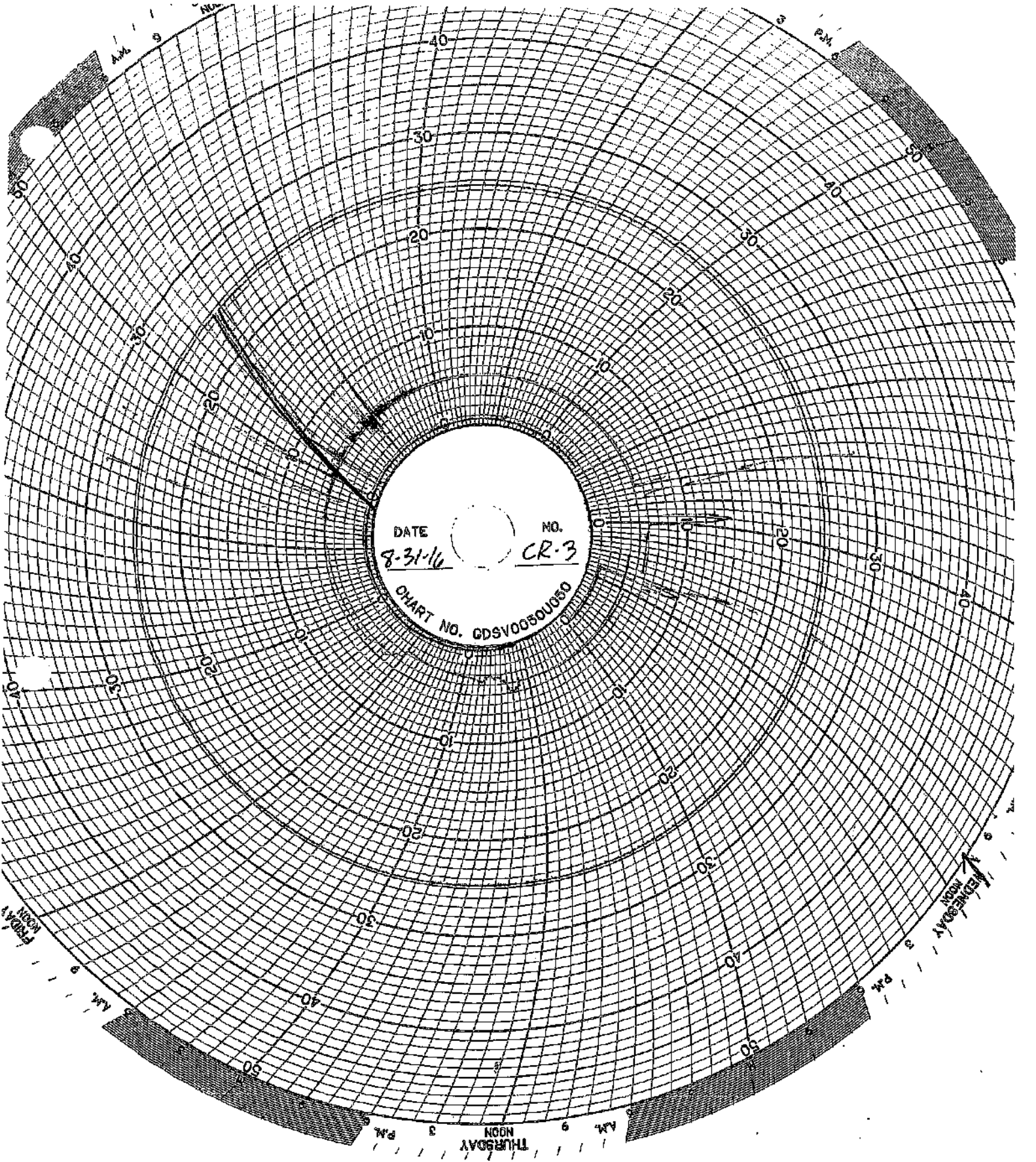
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DATE 8-31-16 NO. CR-3
CHART NO. GDSV0080U060

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MAINTENANCE LOG

UIC Monthly Maintenance Log

8/4/2016	Well 2	Replaced inlet valve on wellhead
----------	--------	----------------------------------

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	
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	
8/4/2016	13.326 g	10.529 g	6.743 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 48228
PHONE (313) 855-0686
FAX (313) 855-1771

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

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

Attention: Mr. Don Anderson

WORK REQUESTED:

Perform Barcol Hardness test on sample submitted.

DESCRIPTION OF SAMPLE:

Sample submitted was identified as a fiberglass test coupon.

(P. O. #Credit Card).

WORK PERFORMED:

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

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

RESULTS:

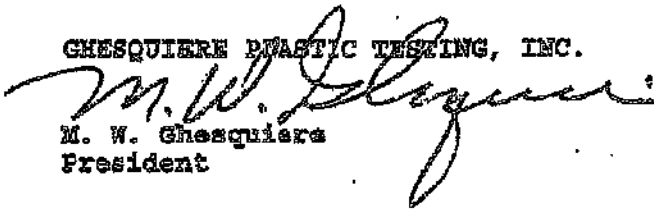
The following determination was made based upon the above test:

BARCOL HARDNESS

	<u>Hardness</u>
Specimen 1	90

Specimen is being returned with this report for further evaluation.

GHESQUIERE PLASTIC TESTING, INC.


M. W. Ghesquiere
President

MWG/kni

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TOTAL 1 PAGES

GHEsqUIERE PLASTIC TESTING, INC.

20480 HARPER AVENUE
HARPER WOODS, MI 48225
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.

GHEsqUIERE PLASTIC TESTING, INC.

M. W. Ghesquiere
President

MWG/dm

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TOTAL 1 PAGES

GHESEQUIERE 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:

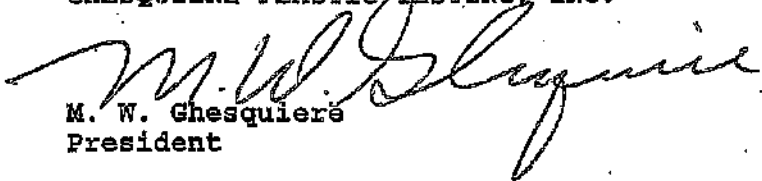
The following determination was made based upon the above test:

BARCOL HARDNESS

	<u>Hardness</u>
Specimen 1	85

Specimen was returned to the client June 16, 2014.

GHESEQUIERE 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



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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www.ardl.com

2887 Gilchrist Rd. | Akron, Ohio 44305 | answers@ardl.com
Toll Free (800) 630-ARDL | Worldwide (330) 794-6600 | Fax (330) 794-6519



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 2683-13a

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 Blichrist Rd. | Akron, Ohio 44305 | answers@ardl.com
Toll Free (800) 850-ARDL | Worldwide (330) 794-8800 | Fax (330) 794-8610



Progress Through Innovation, Technology and Customer Satisfaction

October 22, 2015

TEST REPORT


PN 125322
PO 00154

PLASTICS TESTING DEPARTMENT

Prepared For:

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

Prepared By: 
Melissa Martin
Sr. Project Technician

Approved By: 
Jim Drummond, Sr.
Physical & Plastic Testing, Manager



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

ISO 9001:2008
Registered

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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

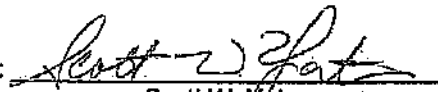
Prepared By:



Melissa Martin
Sr. Project Technician

to

Approved By:



Scott W. Yates
Plastics Testing Assistant Manager

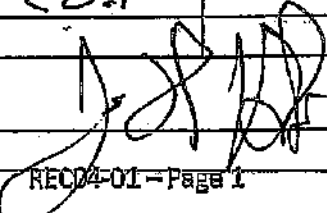
**INJECTION
FINGERPRINTS**

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	9/29/16
Receiving ID#	I 0929/651
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	J.H.
Sampled by	D.A.

Compatible? (RT#)	<input checked="" type="radio"/> Yes <input type="radio"/> No	Barium	
PCEs (ppm)(Only Waste Only)?		Calcium	
TOC (ppm)(CG Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	0.2	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.17	TDS	10.67
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	71°F		
Conductivity	212.2 mS		
% Solids	10.6		
Turbidity	Yes No		
Color (visual)			
TSS (%)	40.1		
Radiation Screen (as needed)			
Lab Signature			

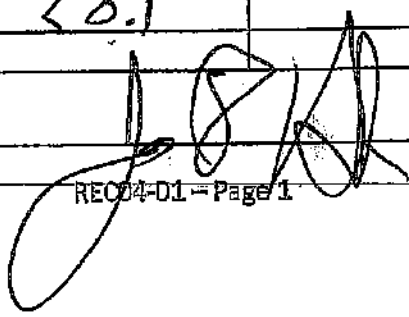
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/1/16
Receiving ID#	ID8011601
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	J.H.
Sampled by	J.H.

COPY

Compatible? (RT#)	Yes No	Barium	
PCEs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	140	Magnesium	
pH (S.U.)	1.0	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.12	TDS	6.6%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	77°F		
Conductivity	131.8 mS		
% Solids	6.6		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiaion Screen (as needed)			
Lab Signature			

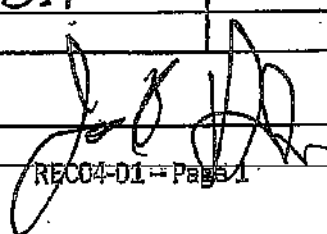
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/1/16
Receiving ID#	308011601
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	EMC


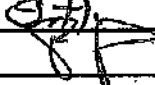
COPY

Compatible? (RT#)	Yes No	Barium	
PCEs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	1.1	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.10	TDS	6.5%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	82°F		
Conductivity	130.4 mS		
% Solids	10.5		
Turbidity	Yes No		
Color (visual)			
TSS (%)	10.1		
Rediflon Screen (as needed)			
Lab Signature			

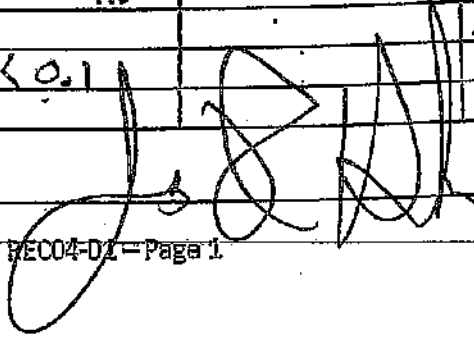
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/4/16	
Receiving ID#	E08041601	
Manifest# Line:		
Land Ban Cert Included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by		
Sampled by		

COPY

Compatible? (RT#)	(Yes) No	Barium	
FCEs (ppm)(Oily Waste Only)?		Calcium	
TDC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	2.3	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.1	TDS	5.47
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	78°F		
Conductivity	107.0 mS		
% Solids	5.4		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/4/16
Receiving ID#	L 080416
Manifest#	Line:
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	J.H.
Sampled by	GK

COPY

PROPERTY	TEST RESULTS	ANALYSIS	REMARKS
Compatible? (RT#)	(Yes No	Barium	
PCEs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CG Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	1.0	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.04	TDS	2.8%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	76°F		
Conductivity	56.3 mS		
% Solids	2.8		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

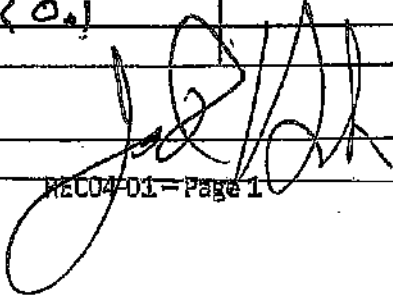
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/2/16	
Receiving ID#	L08021601	
Manifest# Line:		
Land Ban Cert Included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time In		
Time out		
Received by	J.H.	
Sampled by**	NA	

COPY

PARAMETER	UNIT	RESULT	PARAMETER	UNIT	RESULT
Compatible? (RT#)	(Yes) No		Barium		
PCEs (ppm)(Oil Waste Only)?			Calcium		
TOC (ppm)(CC Waste Only)?			Total Iron		
Flash Point (°F)	> 140		Magnesium		
pH (S.U.)	1.1		Sodium Chloride		
Cyanides? (mg/L)			Bicarbonate		
Sulfides? (ppm)			Carbonate		
Specific Gravity	1.10		TDS		6.57
Physical Description			Resistivity		
Stream Consistency	Yes No		Sulfate		
Oil in Sample	Yes No				
Temperature	78°F				
Conductivity	129.2 μS				
% Solids	6.5				
Turbidity	Yes No				
Color (visual)					
TSS (%)	< 0.1				
Radiation Screen (as needed)					
Lab Signature					

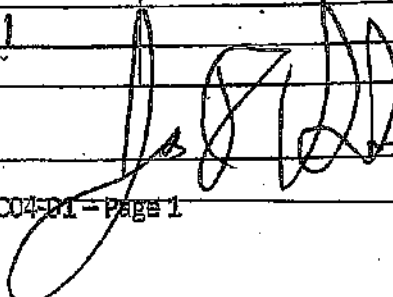
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/2/16	
Receiving ID#	108021602	
Man/Meet# Line:		
Land Ban Cert Included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time In		
Time out		
Received by	J.H.	
Sampled by	SA	

COPY

PROPERTY INFORMATION		CHEMICAL ANALYSIS	
Compatible? (RT#)	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>140	Magnesium	
pH (S.U.)	1.4	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.12	TDS	5.27
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	77°F		
Conductivity	104.2 mS		
% Solids	5.2		
Turbidity	Yes No		
Color (visual)			
TSS (%)	<0.1		
Radiation Screen (as needed)			
Lab Signature			

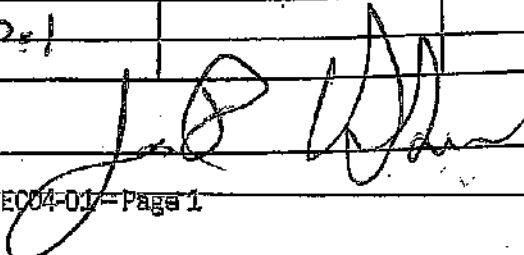
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/5/16
Receiving ID#	108051601
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	J.H.
Sampled by	JH

COPY

PHYSICAL PROPERTIES		CHEMICAL PROPERTIES	
Compatible? (RT#)	Yes No	Barium	
PCBs (ppm)(Oil Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	1.5	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.05	TDS	2.87
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	76°F		
Conductivity	55.0 mS		
% Solids	2.8		
Turbidity	Yes No		
Color (visual)			
TSS (%)	2.0		
Radiation Screen (as needed)			
Lab Signature			

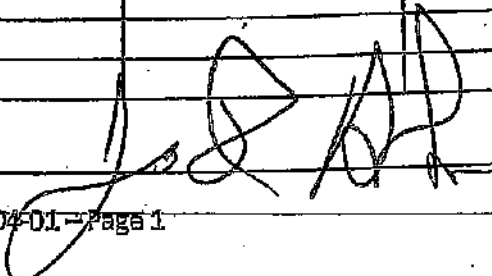
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/5/16
Receiving ID#	E08051602
Manifest# Line:	
Land Ban Cert Included	Yes No
EQT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	J.H. JP
Sampled by:	

COPY

Compatible? (RT#)	Yes No	Barium	
PCEs (ppm)(Oily Waste Only)?		Calcium	
TDC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	1.7	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.09	TDS	4.1%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	79°F		
Conductivity	819 µS		
% Solids	4.1		
Turbidity	Yes No		
Color (Visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

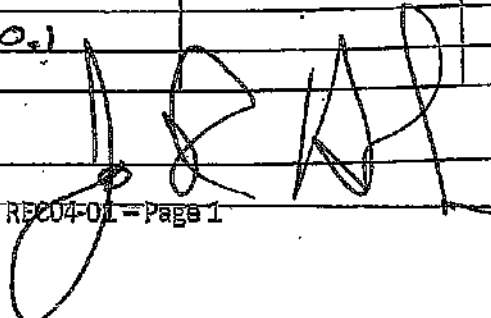
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/8/16
Receiving ID#	T08081601
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	J.H.

COPY

Compatible? (RT#)	(Yes) No	Barium	
PCEs (ppm)(Oil Waste Only)?		Calcium	
TOC (ppm)(CG Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	5.4	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.00	TDS	0.17
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	65°F		
Conductivity	1.9 mS		
% Solids	0.1		
Turbidity	Yes No		
Color (Visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

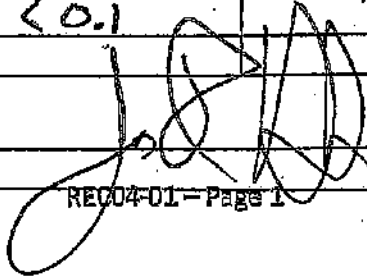
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/9/16
Receiving ID#	188091602
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	J.H.
Sampled by	

COPY

PARAMETER	YES	NO	ANALYSIS	RESULTS
Compatible? (RT#)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Barium	
PCEs (ppm)(Oil Waste Only)?			Calcium	
TOC (ppm)(CG Waste Only)?			Total Iron	
Flash Point (°F)			Magnesium	
pH (S.U.)			Sodium Chloride	
Cyanides? (mg/L)			Bicarbonate	
Sulfides? (ppm)			Carbonate	
Specific Gravity			TDS	0.37
Physical Description			Resistivity	
Stream Consistency	Yes	No	Sulfate	
Oil in Sample	Yes	No		
Temperature				
Conductivity				
% Solids				
Turbidity	Yes	No		
Color (visual)				
TSS (%)				
Radiation Screen (as needed)				
Lab Signature				

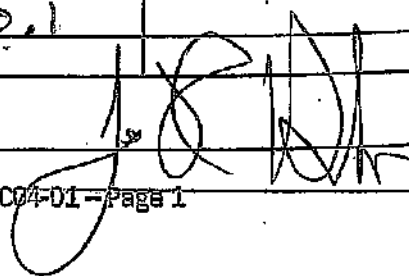
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/9/16
Receiving ID#	J.D8011601
Manifest# Line:	
Leak Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	J.H.
Sampled by	GH

COPY

Compatible? (RT#)	Yes No	Barium	
PCBs (ppm)(Only Waste Only)?		Calcium	
TOC (ppm)(CG Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	6.5	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.00	TDS	0.57
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	66°F		
Conductivity	1.0 mS		
% Solids	0.5		
Turbidity	Yes No		
Color (Visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/10/16
Receiving ID#	108101602
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	
Sampled by	

COPY

Compatible? (RT#)	(Yes) No	Barium	
PCEs (ppm)(Only Waste Only)?		Calcium	
TOC (ppm)(CG Waste Only)?		Total Iron	
Flash Point (°F)	> 148	Magnesium	
pH (S.U.)	6.4	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.00	TDS	0.3%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	73°F		
Conductivity	0.6 mS		
% Solids	0.3		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/10/16
Receiving ID#	T09101601
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	J.H
Sampled by	AK

COPY

Compatible? (RT#)	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CO Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	6.7	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.00	TDS	0.3
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	69°F		
Conductivity	0.6 mS		
% Solids	0.3		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

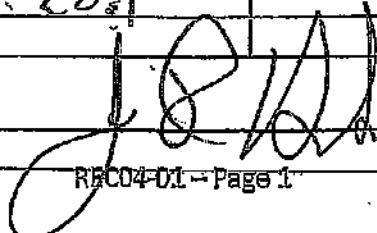
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/11/16
Receiving ID#	10811603
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	J.H.
Sampled by	ST

COPY

Compatible? (RT#)	(Yes) No	Barium	
PCEs (ppm)(Oily Waste Only)?		Calcium	
TDC (ppm)(CG Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	0.1	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.19	TDS	10.7%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	85°F		
Conductivity	213.8 mg		
% Solids	10.7		
Turbidity	Yes No		
Color (visual)			
TSS (%)	10.7		
Radiation Screen (as needed)			
Lab Signature			

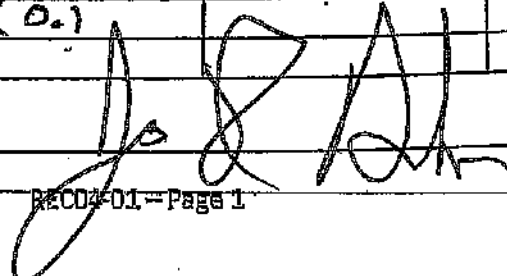
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/11/16
Receiving ID#	T0811602
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	J.H.

COPY

Compatible? (RT#)	Yes No	Barium	
PCEs (ppm)(Only Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	0.2	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.17	TDS	10.8%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	83°F		
Conductivity	216.5 μS		
% Solids	10.8		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

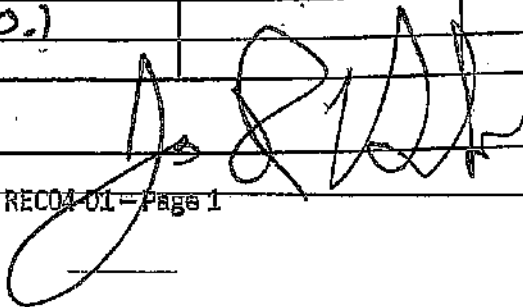
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/11/16
Receiving ID#	ED811601
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	S.H.
Sampled by	ST

COPY

Compatible? (RT#)	(Yes) No	Barium	
PCEs (ppm)(Only Waste Only)?		Calcium	
TDC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	0.3	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.16	TDS	9.1%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	79°F		
Conductivity	181.6ms		
% Solids	9.1		
Turbidity	Yes No		
Color (Visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

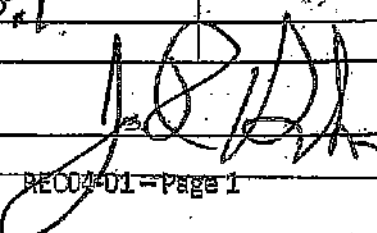
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/12/16
Receiving ID#	108121605
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	RF

COPY

ANALYSIS		CONCENTRATIONS	
Compatible? (RT#)	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(OC Waste Only)?		Total Iron	
Flash Point (°F)	140	Magnesium	
pH (S.U.)	0.5	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.10	TDS	8.57
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	73°F		
Conductivity	169.2 μS		
% Solids	8.5		
Turbidity	Yes No		
Color (visual)			
TSS (%)	60.1		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/12/16
Receiving ID#	I0812/604
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	G.H.
Sampled by	

COPY

Compatible? (RT#)	(Yes) No	Barium	
PCEs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	0.6	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.10	TDS	8.7%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	85°F		
Conductivity	174.2 mS		
% Solids	8.7		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

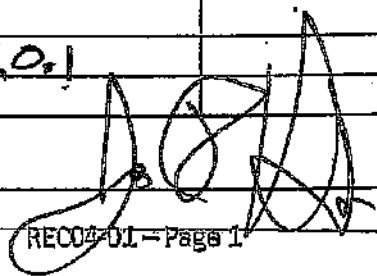
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

RECEIVING & APPROVAL FORM

Date	8.12.16
Receiving ID#	108121603
Manifest#	Line:
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	J.H.
Sampled by	GH

COPY

ANALYSIS INFORMATION		ANALYSIS RESULTS	
Compatible? (RT#)	Yes No	Barium	
PCEs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CG Waste Only)?		Total Iron	
Flash Point (°F)	140	Magnesium	
pH (S.U.)	0.6	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.12	TDS	12.89
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	89°F		
Conductivity	259.4 mS		
% Solids	12.8		
Turbidity	Yes No		
Color (visual)			
TSS (%)	LOI		
Radiation Screen (as needed)			
Lab Signature			

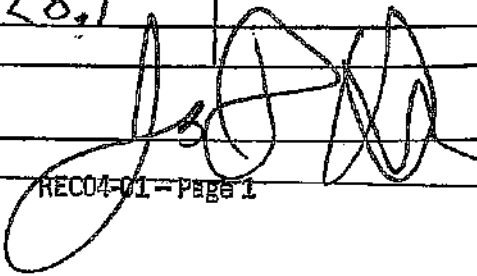
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8-12-16
Receiving ID#	108121602
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	J.H.
Sampled by:	J.H.

COPY

Compatible? (RT#)	(Yes) No	Barium	
PGEs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	0.4	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.12	TDS	12.1%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	89°F		
Conductivity	242.6 mS		
% Solids	12.1		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

RECEIVING & APPROVAL FORM

Date	8-12-16
Receiving ID#	TDR121601
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	<i>[Signature]</i>
Sampled by	<i>[Signature]</i>

COPY

Compatible? (RT#)	<input checked="" type="radio"/> Yes <input type="radio"/> No	Barium	
PCEs (ppm)(Only Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	9.3	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.13	TDS	10.2%
Physical Description		Resistivity	
Stream Consistency	<input type="radio"/> Yes <input type="radio"/> No	Sulfate	
Oil in Sample	<input type="radio"/> Yes <input type="radio"/> No		
Temperature	79°F		
Conductivity	202.0 mS		
% Solids	10.2		
Turbidity	<input type="radio"/> Yes <input type="radio"/> No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature	<i>[Signature]</i>		

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/15/16
Receiving ID#	LOB151601
Manifest# Line:	
Leid Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	

COPY

PHYSICAL/PHYSICOCHEMICAL		CHEMICAL	
Compatible? (RT#)	<input checked="" type="radio"/> Yes <input type="radio"/> No	Barium	
PCEs (ppm)(Oil Waste Only)?		Calcium	
TOC (ppm)(CG Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	0.8	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.12	TDS	6.6%
Physical Description		Resistivity	
Stream Consistency	<input type="radio"/> Yes <input type="radio"/> No	Sulfate	
Oil In Sample	<input checked="" type="radio"/> Yes <input type="radio"/> No		
Temperature	77°F		
Conductivity	131.6 µS		
% Solids	6.6		
Turbidity	<input checked="" type="radio"/> Yes <input type="radio"/> No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

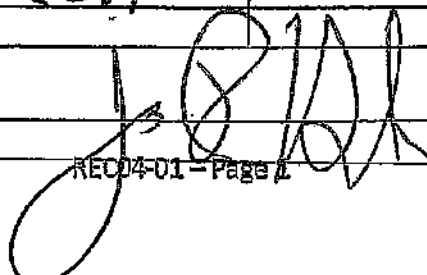
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

RECEIVING & APPROVAL FORM

Date	8/15/16
Receiving ID#	108151602
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator:	
Client	
Transporter	
Time In	
Time out	
Received by	J.P.
Sampled by	J.P.

COPY

Compatible? (RT#)	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	1.0	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.15	TDS	7.07
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	84°F		
Conductivity	140.2 mS		
% Solids	7.0		
Turbidity	Yes No		
Color (visual)			
TSS (%)	LO.1		
Radiation Screen (as needed)			
Lab Signature			

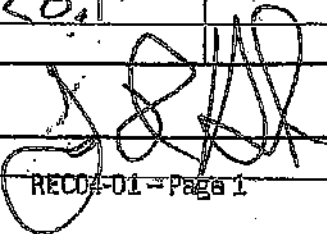
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/16/16
Receiving ID#	108761601
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	J.H.
Sampled by	D.A.

COPY

Compatible? (RT#)	(Yes) No	Barium	
PCEs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	1.0	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.11	TDS	582
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	74°F		
Conductivity	116.3-5		
% Solids	5.8		
Turbidity	Yes No		
Color (visual)			
TSS (%)	40.1		
Radiation Screen (as needed)			
Lab Signature			

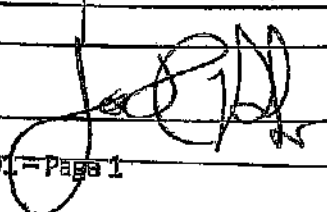
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

RECEIVING & APPROVAL FORM

Date	8/16/16	
Receiving ID#	I08161602	
Manifest# Line:		
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.H.	
Sampled by	D.P.	

COPY

Compatible? (RT#)	(Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CG Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	1.0	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.12	TDS	627.7
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	73°F		
Conductivity	132.3 mS		
% Solids	6.7		
Turbidity	Yes No		
Color (Visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

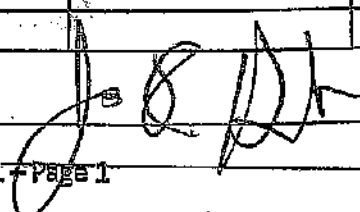
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/17/16	
Receiving ID#	L08171601	
Manifest# Line:		
Land Ban Cert Included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time In		
Time out		
Received by	S.H.	
Sampled by	S.H.	

COPY

Compatible? (RT#)	(Yes) No	Barium	
PCEs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	0.6	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.12	TDS	6.77
Physical Description		Reactivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	73°F		
Conductivity	134.3 μS		
% Solids	6.7		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

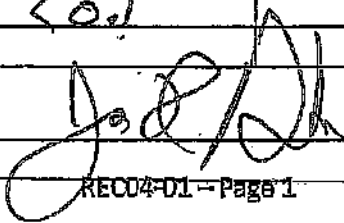
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECNOLOGIES, LLC

RECEIVING & APPROVAL FORM

Date	8/18/16	
Receiving ID#	108181601	
Manifest#	Line:	
Land Ban Cert Included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time In		
Time out		
Received by	J.H.	
Sampled by	RD	

COPY

RECEIVING INFORMATION		ANALYSIS INFORMATION	
Compatible? (RT#)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Barium	
PCEs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	0.2	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.15	TDS	110.102
Physical Description		Resistivity	
Stream Consistency	Yes <input type="checkbox"/> No <input type="checkbox"/>	Sulfate	
Oil in Sample	Yes <input type="checkbox"/> No <input type="checkbox"/>		
Temperature	81°F		
Conductivity	332.4 mS		
% Solids	16.6		
Turbidity	Yes <input type="checkbox"/> No <input type="checkbox"/>		
Color (visual)			
TSS (%)	< 0.1		
Retention Screen (as needed)			
Lab Signature			

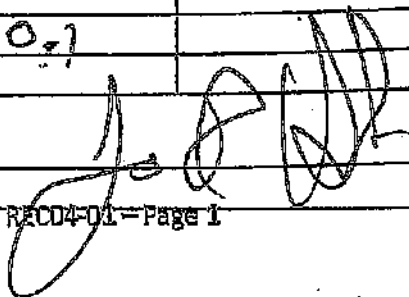
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

RECEIVING & APPROVAL FORM

Date	8/18/16
Receiving ID#	LO8181602
Manifest# Line:	
Leid Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.P.
Sampled by	J.P.

COPY

Compatible? (RT#)	Yes No	Barium	
PCEs (ppm)(Oil Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	0.4	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.14	TDS	10.1.9.
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	75°F		
Conductivity	202.2 mS		
% Solids	10.1		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

RECEIVING & APPROVAL FORM

Date	8/19/16
Receiving ID#	108191601
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	J.H.
Sampled by	[Signature]

COPY

PHYSICAL DESCRIPTION		CHEMICAL DESCRIPTION	
Compatible# (RT#)	(Yes) No	Barium	
PCEs (ppm)(Oil Waste Only)?		Calcium	
TOC (ppm)(CG Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	< 0.1	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.25	TDS	10.12
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	74°F		
Conductivity	202.3 mS		
% Solids	10.1		
Turbidity	Yes No		
Color (Visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature	[Signature]		

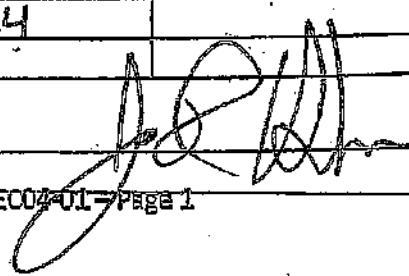
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/19/16	
Receiving ID#	L0819160	
Manifest# Line:		
Land Ban Cert Included	Yes	No
EOT Approval #		
Generator		
Client		
Transporter		
Time In		
Time out		
Received by	J.H.	
Sampled by	J.H.	

COPY

Compatible? (RT#)	Yes	No	Barium	
PCEs (ppm)(Oily Waste Only)?			Calcium	
TOC (ppm)(GC Waste Only)?			Total Iron	
Flash Point (°F)	> 140		Magnesium	
pH (S.U.)	0.4		Sodium Chloride	
Cyanides? (mg/L)			Bicarbonate	
Sulfides? (ppm)			Carbonate	
Specific Gravity	1.14		TDS	8.7
Physical Description			Resistivity	
Stream Consistency	Yes	No	Sulfate	
Oil in Sample	Yes	No		
Temperature	80°F			
Conductivity	173.7 mS			
% Solids	8.7			
Turbidity	Yes	No		
Color (visual)				
TSS (%)	0.4			
Radiation Screen (as needed)				
Lab Signature				

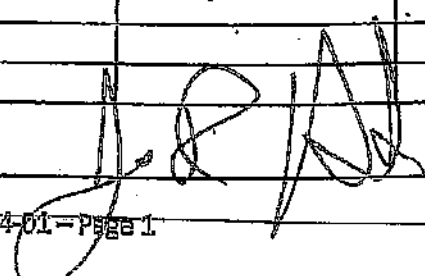
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/22/16	
Receiving ID#	108221602	
Manifest# Line:		
Land Ban Cert Included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	J.H.	
Sampled by	J.H.	

COPY

Compatible? (RT#)	Yes	No	Barium	
PCEs (ppm)(Oily Waste Only)?			Calcium	
TOC (ppm)(CC Waste Only)?			Total Iron	
Flash Point (°F)	2140		Magnesium	
pH (8.U.)	0.5		Sodium Chloride	
Cyanides? (mg/L)			Bicarbonate	
Sulfides? (ppm)			Carbonate	
Specific Gravity	1.14		TDS	8.67
Physical Description			Resistivity	
Stream Consistency	Yes	No	Sulfate	
Oil in Sample	Yes	No		
Temperature	73°F			
Conductivity	170.8 mS			
% Solids	8.6			
Turbidity	Yes	No		
Color (Visual)				
TSS (%)	20.1			
Radiation Screen (as needed)				
Lab Signature				

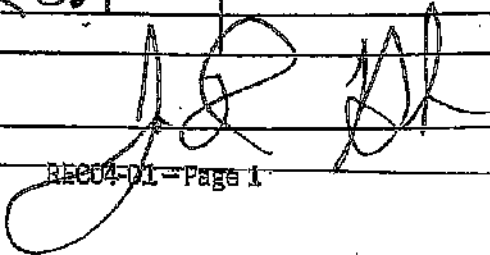
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

RECEIVING & APPROVAL FORM

Date	8/22/10
Receiving ID#	108221602
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	JH
Sampled by	DL

COPY

Compatible? (RT#)	(Yes) No	Barium	
PCEs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	0.5	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.19	TDS	9.87
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	73°F		
Conductivity	196.4 mS		
% Solids	9.8		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/22/16
Receiving ID#	108221603
Manifest# Line:	
Leid Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	<i>[Signature]</i>
Sampled by	<i>[Signature]</i>



COPY

TEST DESCRIPTION	RESULTS	TEST DESCRIPTION	RESULTS
Compatible? (RT#)	Yes No	Barium	
PCBa (ppm)(Only Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 146	Magnesium	
pH (S.U.)	0.8	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.12	TDS	7.1 %
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	79°F		
Conductivity	141.4 mS		
% Solids	7.1		
Turbidity	Yes No		
Color (Visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature	<i>[Signature]</i>		

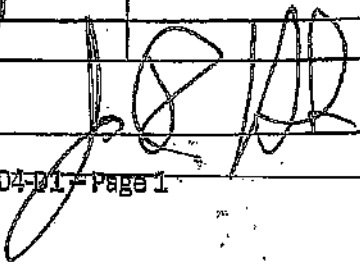
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

RECEIVING & APPROVAL FORM

Date	8/23/16	
Receiving ID#	108231601	
Manifest# Line:		
Leid Ban Cert Included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time In		
Time out		
Received by		
Sampled by		

COPY

ANALYSIS OF		CONTAMINANTS	
Compatible? (RT#)	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CG Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	1.2	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.07	TDS	4.67
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	73°F		
Conductivity	92.5ms		
% Solids	4.6		
Turbidity	Yes No		
Color (Visual)			
TSS (%)	< 0.1		
Radleron Screen (as needed)			
Lab Signature			

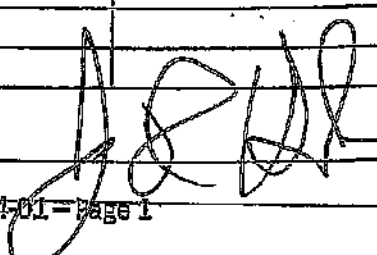
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/24/16
Receiving ID#	108241601
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	J.H.
Sampled by	J.H.

COPY

Compatible? (RT#)	<input checked="" type="radio"/> Yes <input type="radio"/> No	Barium	
PCEs (ppm)(Dily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	0.3	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.14	TDS	11.5
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	74°F		
Conductivity	229.9 mS		
% Solids	11.5		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

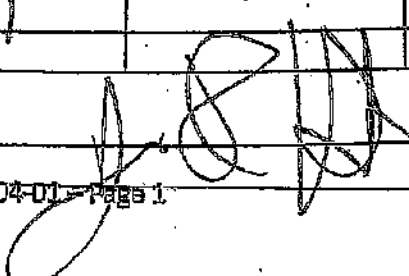
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/25/16
Receiving ID#	108251601
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by*	J.K.F.

COPY

Compatible? (RT#)	<input checked="" type="radio"/> Yes <input type="radio"/> No	Barium	
PCEs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	0.8	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.11	TDS	2.4%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	81°F		
Conductivity	39.0 mS		
% Solids	2.4		
Turbidity	Yes No		
Color (Visual)			
TSS (%)	4.1		
Radiation Screen (as needed)			
Lab Signature			

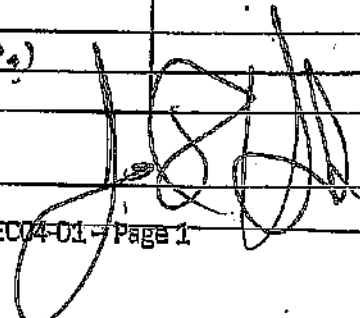
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

RECEIVING & APPROVAL FORM

Date	8/25/16
Receiving ID#	108251602
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	JH.
Sampled by	J.K.F.

COPY

Compatible? (RT#)	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TCC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>140	Magnesium	
pH (S.U.)	<9.1	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.17	TDS	15.02
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	81°F		
Conductivity	300.2 mS		
% Solids	15.0		
Turbidity	Yes No		
Color (Visual)			
TSS (%)	<0.1		
Radiation Screen (as needed)			
Lab Signature			

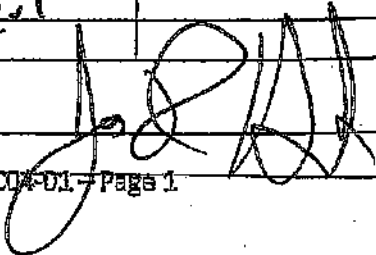
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/26/16
Receiving ID#	108261601
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.H
Sampled by	JKF

COPY

Compatible? (RT#)	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CG Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	< 0.1	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.22	TDS	9.22
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	79°F		
Conductivity	179.5 us		
% Solids	9.2		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

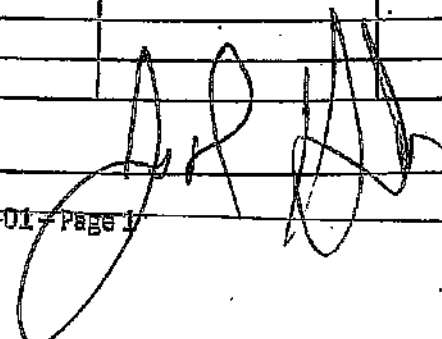
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/26/16
Receiving ID#	108261602
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	5:40
Received by	RP
Sampled by	RP

COPY

Compatible? (RT#)	Yes No	Barium	
PCEs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CG Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	0.4	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.15	TDS	7.67
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	84°F		
Conductivity	153.8 μS		
% Solids	7.6		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

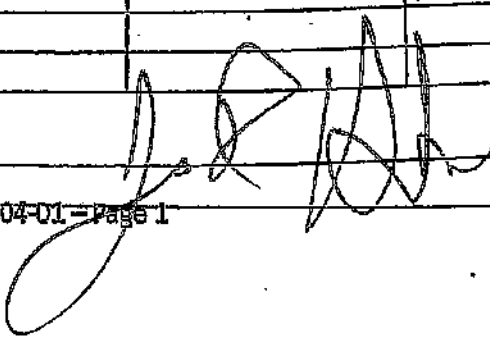
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

RECEIVING & APPROVAL FORM

Date	8.29.16
Receiving ID#	108291601
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	J.H.
Sampled by	JKF

COPY

TESTS	RESULTS	PARAMETERS	RESULTS
Compatible? (RT#)	(Yes) No	Barium	
PCEs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	< 0.1	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.24	TDS	17.0
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	84°F		
Conductivity	340.7 μS		
% Solids	17.0		
Turbidity	Yes No		
Color (visual)			
TSS (%)	0.5		
Radiation Screen (as needed)			
Lab Signature			

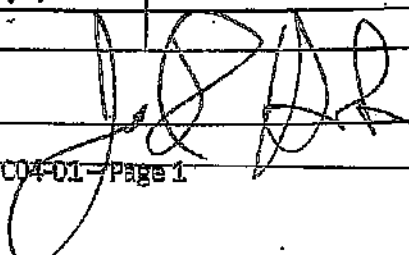
FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

RECEIVING & APPROVAL FORM

Date	8/31/16
Receiving ID#	10831601
Manifest#	Line:
Leak Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	J.P.
Sampled by	EP

COPY

Compatible? (RT#)	Yes No	Barium	
PCEs (ppm)(Only Waste Only)?		Calcium	
TOC (ppm)(CG Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	0.3	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.15	TDS	117.9
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	75°F		
Conductivity	228.9 mS		
% Solids	11.7		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

**WASTE STREAMS
CHARACTERIZATIONS**

Generator's Waste Profile and Service Agreement

In order to properly transport and manage your waste stream, please complete the following:

SECTION 1: GENERAL INFORMATION

	Generator Information	Customer Information	Billing Information
EPA ID #	[REDACTED]		
Company	[REDACTED]		
Address 1	[REDACTED]		
Address 2	[REDACTED]		
City, State, Zip Code	[REDACTED]		
Contact	[REDACTED]		
Telephone 1	[REDACTED]		
Telephone 2	[REDACTED]		
Facsimile	[REDACTED]		
Email	[REDACTED]		

SECTION 2: WASTE INFORMATION

Common Name of Waste: <u>Sodium Hydroxide Water</u> ✓	acceptable
Process Generating Waste: <u>Unused Product mixed with water</u> ✓	[Signature]
Waste Volume Produced Annually: <u>(4) totes</u>	08.31.16
Shipping Increments: <input type="checkbox"/> One Time <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Quarterly <input checked="" type="checkbox"/> Yearly <input type="checkbox"/> Other	
Check Any Hazardous Characteristics That Apply: <input type="checkbox"/> Reactive <input type="checkbox"/> Corrosive <input type="checkbox"/> Toxic <input type="checkbox"/> Flammable <input type="checkbox"/> Listed	

SECTION 3: USED/WASTE OIL

Does your waste stream contain oil? Yes No ✓

Is this oil considered to be a "used oil" as determined by 40CFR 280.10? Yes No

(If yes, then please complete used oil certification sheet.)

Attach analytical and check the appropriate box below for any parameters for which your oils have been tested.

PCBs TCLP (Volatiles/Semivolatiles) Total Halogens Total Metals

SECTION 4: PHYSICAL AND CHEMICAL PROPERTIES

Is this waste a nonhazardous liquid industrial by-product? YES NO

What is the Color? White Grey Black Clear

Describe the Odor. Strong Mild None

Does it Pass Paint Filter Test YES NO

Physical State at 70° F Liquid Slurry Other

Density (weight/volume)

Specific Gravity

pH: 12.20 - 12.43 ✓ *cate!*

Flash Point (closed cup) >200 ✓

Viscosity at 70° F High Medium Low

Percent Composition 99 % Water 1 % Oil _____ % Rag _____ % Solids

Solids Composition: Suspended Settable Both

Chemical Composition: *List all major constituents, include herbicides, pesticides, carcinogens, pathogens and other hazardous constituents.*

Chemical	Minimum	Maximum
Sodium Hydroxide	6 %	12 %
Water	88 %	94 %
	%	%
	%	%

SECTION 5: TCLP AND TESTING CERTIFICATION

Please attach analytical results to this profile and check either "YES" indicating concentrations above the regulatory level or "NO" verifying the constituent is not present above regulatory level. *All constituents must have either a "YES" or "NO" checked.*

Check the method used: Total TCLP

METALS mg/L (ppm)			
Metal	Level > than	Yes	No
D004 Arsenic	5.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D005 Barium	100.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D006 Cadmium	1.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D007 Chromium	5.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D008 Lead	5.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D009 Mercury	0.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D010 Selenium	1.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D011 Silver	5.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ORGANICS mg/L (ppm)			
Material	Level > than	Yes	No
D018 Benzene	0.5	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D019 Carbon Tetrachloride	0.5	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D021 Chlorobenzene	100.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D022 Chloroform	5.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D028 1, 2-Dichloroethane	0.5	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D029 1, 1-Dichloroethylene	0.7	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D035 Methyl Ethyl Ketone	200.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D039 Tetrachloroethylene	0.7	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D040 Trichloroethylene	0.5	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D043 Vinyl Chloride	0.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ACID EXTRACTABLES mg/L (ppm)			
Material	Level > than	Yes	No
D023 o-Cresol	200	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D024 m-Cresol	200	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D025 p-Cresol	200	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D028 Cresol	200	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D037 Pentachlorophenol	100	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D041 2, 4, 5-Trichlorophenol	400	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D042 2, 4, 6-Trichlorophenol	2.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>

BASE NEUTRAL EXTRACTABLES mg/L (ppm)			
Material	Level > than	Yes	No
D027 1, 4-Dichlorobenzene	7.5	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D030 2, 4-Dinitrotoluene	0.13	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D032 Hexachlorobenzene	0.13	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D033 Hexachlorobutadiene	0.5	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D034 Hexachlorocyclohexane	1.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D038 Nitrobenzene	2.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D039 Pyridine	5.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>

HERBICIDES and PESTICIDES mg/L (ppm)			
Material	Level > than	Yes	No
D012 Endrin	0.02	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D013 Lindane	0.4	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D014 Methoxychlor	10.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D015 Toxaphene	0.5	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D016 2, 4-D	10.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D017 2, 4, 5-TP (Silvex)	1.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D029 Chlordane	0.03	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D031 Heptachlor	0.008	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SECTION 6. SHIPPING INFORMATION

Is this waste a D.O.T. Hazardous Material?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
By-Product Reporting Code:	<input type="checkbox"/> 017L -- Crankcase Oil <input type="checkbox"/> 019L -- Coolants and Water Soluble Oil <input type="checkbox"/> 021L -- Other Oil <input checked="" type="checkbox"/> 029L -- Other Wastes ✓ <input type="checkbox"/> _____
Proper Shipping Name:	Non-regulated liquid
Method of Shipment:	<input type="checkbox"/> Bulk <input type="checkbox"/> Drum <input checked="" type="checkbox"/> Tote
Additional Handling / Comments:	
Waste Receipt Classification:	<input type="checkbox"/> Organic Waste <input type="checkbox"/> Oily Waste <input type="checkbox"/> Metal Derived Waste

Section 7. Terms and Conditions of Waste Service

1. **Waste Disposal.** Subject to the terms and conditions contained herein and those in the Proposal and Approval Notification Letter, Advanced Resource Recovery, (hereinafter "ARR" or "Company"), and the Service Provider and/or Generator, (hereinafter collectively "Customer"), agree to be legally bound hereby and that ARR agrees to accept at its facility (the "Facility") Industrial Waste (hereinafter referred to as "Industrial Waste" or "Waste") delivered by Customer, and which is acceptable to ARR as herein provided.

2. **The Agreement.** The entire agreement of the parties for the disposal of Industrial Waste (the "Agreement") shall consist of these terms and conditions, and any application, permit, approval or other documents provided by the Company that may be applicable to such Waste. Waste accepted at the Facility by Company will constitute Customer's acceptance of the Proposal and Approval Notification's terms and conditions as the terms and conditions herein. Each Waste Approval's terms and conditions will supersede the terms and conditions of any prior agreement between the parties.

3. **Waste Accepted at Facility.** Customer warrants that the Waste described in the Waste Characterization Profile that is delivered to Company at its Facility hereunder will not contain any quantity of hazardous materials or substances, radioactive materials or substances or toxic wastes

or substances as defined by applicable federal, state and/or local laws or regulations. Any waste which does not meet this requirement shall hereinafter be referred to as "Unacceptable Waste." The Customer shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean the Company's disposal facility located at 27140 Princeton Ave., Inkster, MI 48141.

4. **Industrial Waste.** Customer warrants that the Waste delivered to Company hereunder will not contain any waste that is not specifically described on the Waste Characterization Profile which is incorporated herein and which is subsequently approved by the Company and will meet the material description as set forth in the application and otherwise in all significant respects. The parties may incorporate additional Industrial Waste as part of this Agreement if prior to delivery of such Waste to Company, Customer has provided a Waste Characterization Profile Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Industrial Waste disposal. Title to all Waste handled or disposed of by Company shall at all times remain with Customer.

5. **Rights of Refusal/Rejection.** Company has the right to refuse or reject after acceptance any load of wastes delivered to the facility if the Company believes the Customer has breached (or is breaching) its warranties or agreements hereunder. If Customer delivers wastes in breach of any warranty or agreements herein, Company may in its sole discretion, either remove and dispose of that waste and charge Customer for the costs or require Customer to promptly remove the waste.

6. **Charges and Payment.** Customer agrees to pay the Company's rates as written in the Proposal and Approval Notification Letter, which may be modified from time to time upon thirty (30) days written notice to the Customer. Payment shall be made by Customer within thirty (30) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Customer agrees to pay service charge of 1.5% per month, or the maximum interest rate permitted by law whichever is less.

7. **Term.** This Agreement shall continue in effect until terminated by Company or Customer, with or without cause, upon prior notice by either party and representations and warranties regarding the waste delivered and the indemnities set forth herein shall survive termination of this Agreement.

8. **Indemnity.** Customer agrees to indemnify, save harmless, and defend Company, its Corporate affiliates, employees, officers and directors from and against any and all liabilities, claims, penalties, forfeitures, suits and the costs and expenses incident thereto (including costs of defense, settlement, and reasonable attorney's fees), which it may hereafter incur, become responsible for, or pay out as a result of death or bodily injuries to any person, destruction or damage to any property, contamination of or adverse effects on the environment, of any violation of governmental laws, regulations, or orders caused, in whole or in part by the Customer's breach of any warranty, term or provision of this Agreement, or any act, omission, willful misconduct or negligence of the Customer, its employees, or subcontractors in the performance of this Agreement.

9. **Default.** The occurrence of any of the following events shall also constitute an event of default by the Customer and shall give the Company the right to immediately terminate this Agreement. (a) A petition for reorganization or bankruptcy filed by or against the Customer; (b) Failure by Customer to pay any amount due to Company (c) Any breach by Customer of any of its obligations pursuant to the Agreement. The parties covenant and agree that the Company's removal and acceptance of the Customer's Waste constitutes work on and an improvement to the Customer's real property. Accordingly, Customer grants to Company the right to file any and all documents permitted by law or otherwise on Customer's real property to secure the monies owed to Company by Customer for services performed.

10. **Attorneys' Fee.** In the event of a breach by Customer of the Agreement, the Customer shall pay all attorneys' fee, collection fees and costs of Company incident to any action brought to enforce the Agreement.

11. **Assignment.** Customer may not assign, transfer or otherwise vest in any other company, entity or person, any of its rights or obligations under the Agreement without the prior written consent of Company.

12. **Miscellaneous.** The Agreement shall be governed by and construed in accordance with the laws of the state of Michigan in which the Facility is located. The price and terms of this proposal are confidential and are not to be disclosed to any other persons or entities. Customer agrees to take all precautions to insure that its officers, employees and agents maintain the confidentiality of this information and do not disclose the price and terms of this proposal. Service Provider is defined as any company working on behalf of a Generator.

13. **Notices.** All notices herein shall be considered as having been given upon being placed in the mail, certified, postage prepaid, addressed to the Company or Customer at the address set forth in the Waste Characterization Profile.

SECTION 8. GENERATOR CERTIFICATION AND WASTE SERVICE AGREEMENT

I certify that I am authorized to sign below and all information is complete, factual (including attached information), is an accurate representation of the known and suspected hazards and of waste generator regulations pertaining to the waste described herein and agree to the terms and conditions of waste services in Section 7. Based on our knowledge of the process generating this specific waste stream, the material is not classified as a TSCA regulated waste.

Internal Use Only. AR LDF LO ST

[REDACTED]

Re: pH of Sodium Hydroxide Waste Solution (Cleaner)

[REDACTED]

Per your request, please find below the documented pH of each waste tote of sodium hydroxide.

Sodium Hydroxide Tote # 1.	pH = <u>12.35</u>	Date = <u>7-5-16</u>
Sodium Hydroxide Tote # 2.	pH = <u>12.43</u>	Date = <u>7-5-16</u>
Sodium Hydroxide Tote # 3.	pH = <u>12.34</u>	Date = <u>7-5-16</u>
Sodium Hydroxide Tote # 4.	pH = <u>12.20</u>	Date = <u>7-5-16</u>

I certify that the pH readings above were taken and recorded by:

[REDACTED]

Signature

[REDACTED]

Date

[REDACTED]



ENPREP® 274SE is a highly versatile, moderately conductive, alkaline cleaner. As an electrocleaner, it is used cathodically for brass, and for nickel or steel activation prior to replate. As a soak cleaner, it effectively removes oils and buffing compounds from steel, brass, buffed nickel and stainless steel. The high surfactant content of ENPREP 274SE withstands long transfer times on automated equipment while providing free rinsing. READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT.

PHYSICAL PROPERTIES OF THE DEPOSIT

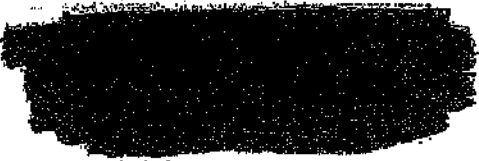
Form	Powder
Foam	Moderate foam blanket produced to reduce misting, drag out and heat losses.
Conductivity	Medium
Phosphated	Excellent smut removal properties.
Chelation	None

MATERIALS REQUIRED

ENPREP 274SE is a powdered material mixed with water to form the operating solution.

EQUIPMENT REQUIRED

Tank Materials	Steel
Rectifier	0 to 9 volts
Heating Coils	Cold rolled steel, stainless steel or titanium
Heat Controls	Automatic heat controllers are recommended.
Electrodes	Perforated steel, perforated nickel-plated steel
Ventilation	Recommended. Solution is classified D-4 by ANSI. Consult the American Conference of Industrial Hygienist's book entitled, "Industrial Ventilation, A Manual of Recommended Practice."
Mixer	A power mixer is recommended for dissolution of added chemicals.
Temperature Control	Recommended



OPERATING CONDITIONS

	<u>Nominal</u>	<u>Range</u>
Concentration	8 oz/gal (60 g/L)	8 to 10 oz/gal (45 to 75 g/L)
Temperature	160 °F (71 °C)	150 to 200 °F (66 to 93 °C)
Immersion Time		
As soak cleaner	3 minutes	1 to 5 minutes
Work as Cathode (Direct)	3 minutes	1 to 5 minutes
Current Density	30 ASF (3 ASD)	20 to 40 ASF (2 to 4 ASD)
Voltage	4 to 6 volts	


MAKE-UP PROCEDURE

For each 100 gallons (378 liters):

1. Add 75 gallons (284 liters) of water to the electrocleaner tank and adjust solution temperature to 100 °F (37.7°C).
2. While continuously stirring, slowly add 50 lb (22.7 kg) of ENPREP 274SE. A power mixer is preferred for stirring.
3. When the ENPREP 274SE has completely dissolved, adjust the solution volume to operating level. Stir well and heat to operating temperature.

OPERATION

For nominal consistent results, the ENPREP 274SE must be replenished based upon analysis at time intervals and amounts recommended.

Operation of the  process below the recommended concentration range will generally result in poor cleaner performance, characterized by blotches, clouds, pits or poor adhesion in the plated deposits.

Operation at concentrations above the recommended range may result in separation of the surfactants from the solution, accompanied by poor cleaning.

When the quantity of maintenance material added approximates the quantity of material used for the original make-up, a batch dump should be considered, since the ability of the operating solution to digest more soils may be so reduced as to make further maintenance additions of cleaner unproductive and uneconomic.



SAFETY AND HANDLING INSTRUCTIONS

DANGER! [REDACTED] AND THE OPERATING SOLUTION CONTAIN SODIUM HYDROXIDE WHICH MAY CAUSE SEVERE BURNS.

HAZARDS: [REDACTED] and the operating solution contain sodium hydroxide which may cause severe burns to skin and eyes, possible blindness. Inhalation may cause severe irritation, burns of respiratory tract. Ingestion may cause severe irritation, burns to gastro-intestinal system. Do not get in eyes, on skin, or on clothing. Do not inhale or take internally.

FIRST AID: In case of contact with ENPREP 274 or the operating solution, immediately flush skin or eyes with plenty of water for at least 15 minutes; get immediate medical attention. Get immediate medical attention. Remove contaminated clothing.

HANDLING: When preparing or adding to solutions, always add [REDACTED] slowly and cautiously. Do not get in eyes, on skin, or on clothing. Do not inhale or take internally. Always wear goggles, face shield, rubber gloves, respirator and protective clothing when handling. When making up or adding [REDACTED] solution, allow the solution to cool to a temperature of 120 °F (49 °C) or lower, and then slowly [REDACTED] into the warm solution to ensure good mixing. If large quantities of cleaner are dumped directly into the hot cleaning solution, there is danger of eruption due to the heat of solution of the powder. Exhaust ventilation is recommended to remove dust, mist or vapors that may be generated during makeup and operation. Avoid contamination with acids or any other foreign matter. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling.

CONTAINER INFORMATION: Keep containers tightly closed. Loosen closure cautiously when opening. Store indoors in a cool dry area. Do not reuse containers. Wash before disposal. Improper disposal or reuse of container may be dangerous and illegal.

REFER TO MSDS FOR FURTHER SAFETY AND HANDLING INFORMATION,

CONTROL

The following analytical procedures are recommended for use by personnel who have been trained to use laboratory practices which are considered safe and prudent by chemical industry standards. Such practices include suitable personal protective equipment, the use of proper equipment, the use of proper methods of handling all chemicals and proper laboratory procedures. Use only analytical reagent grade chemicals and deionized or distilled water in the following analytical procedures.

CAUTION: The following procedures involve the use of potentially hazardous chemicals. Consult manufacturer's material safety data sheets and follow the appropriate safety precautions.

ANALYSIS OF ENPREP 274SE

Equipment Needed

10 mL pipet
100 mL Graduated cylinder
50 mL buret
250 mL Erlenmeyer flask

Reagents Needed

1.0N Sulfuric Acid

2% Phenolphthalein Indicator

Procedure

1. Pipet 10 mL sample of working solution, cooled to room temperature into a 250 mL Erlenmeyer flask.
2. Add approximately 75 mL distilled water. Swirl to mix.
3. Add 3 to 5 drops of Phenolphthalein Indicator.
4. Titrate with 1.0N H₂SO₄ until the solution turns from a deep red to a permanent colorless solution.

Calculation

(mL 1.0N H₂SO₄ titrated) x (1.1) = oz/gal ENPREP 274SE

(Note: oz/gal x 7.5 = g/L)

Replenishment

Replenish to original make-up concentration.

When the total quantity of replenishment material added approximates the quantity of material used for the original make-up, the ability of the operating solution to remove additional soils may be so reduced as to make further additions of cleaner unproductive and uneconomical. At this point a batch dump should be considered.



MATERIAL SAFETY DATA SHEETS

For more detailed information on the toxicological properties of the products described herein, reference can be made to the Material Safety Data Sheet (MSDS) for each product. If you do not have the proper MSDS, it can be requested from: Enthone Inc., attention: Regulatory Affairs Department, 350 Frontage Road, West Haven, CT 06516. For emergency assistance call CHEMTREC (800) 424-9300.

WARRANTY AND DISCLAIMER

The information presented herein is to the best of our knowledge true and accurate and all recommendations and suggestions appearing in this bulletin covering the use of our products are based upon information believed to be reliable. However, since the conditions of use are beyond our control, this information is given on the express condition and agreement that Enthone Inc. will not be liable to any person in contract, tort (including negligence), strict liability or otherwise for any claims, damages or losses whatsoever. Nothing herein shall be deemed a recommendation to use any product or process in violation of any existing patent rights and no warranties, expressed or implied, are made regarding the information, product, processes, recommendations, description and safety notations contained herein. The above includes proprietary information of Enthone Inc. and is furnished to you for your use solely on products or processes supplied by us to you.

CUSTOMER ORDER CENTERS



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www.cooksonelectronics.com

06 Apr05

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enthone

Material Safety
Data Sheet

Material Safety Data Sheet

Emergency phone: US & Canada: 800 424-9300
Mexico: 01 800 022 1400, (55) 5559 1588



Health	3
Flammability	0
Instability	7
Special	
Personal protection	

1. Product and company identification

Product name
Product Code
Material uses
Manufacturer

Specialty chemicals for the electronics and surface finishing industries.
: Enthone Inc
350 Frontage Road
West Haven, CT 06516
Phone: (203) 799-4917
Fax: (203) 799-8179
www.cooksonelectronics.com
Enthone QMI de Mexico S.A. de C.V.
Norte 59 No. 898
Col. Industrial Vallejo
Mexico, D.F. 02300
Mexico
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Validation date : 4/24/2009. Superseded Date : 1/28/2009
Prepared by : T. Valverde
(203)-799-4917

2. Hazards identification

Physical state : Solid. [Powder.]
OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency overview : DANGER!
Severely corrosive to the digestive tract. Corrosive to the eyes, skin and respiratory system. Causes severe burns. Harmful if swallowed. Do not breathe dust. Do not ingest. Do not get in eyes or on skin or clothing. Contains material that may cause target organ damage, based on animal data. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.
Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.
Potential acute health effects
Inhalation : Corrosive to the respiratory system. May cause severe irritation or burns. Exposure can cause lung irritation, chest pain and edema, which may be fatal.
Ingestion : Harmful if swallowed. Corrosive to the digestive tract. Can cause target organ damage. Adverse symptoms may include the following: nausea or vomiting stomach pains. Ingestion may cause gastrointestinal irritation and diarrhea. CAUSES SEVERE DIGESTIVE TRACT BURNS.
Skin : Corrosive to the skin. Causes burns. Adverse symptoms may include the following: blistering, redness, itching, swelling, pain

Continued on next page

2. Hazards identification

Eyes : Corrosive to eyes. Causes burns. Direct contact with the eyes can cause irreversible damage, including blindness.

Potential chronic health effects

Chronic effects : Contains material that can cause target organ damage. Adverse symptoms may include the following:

Proprietary Silicates: Prolonged contact can cause severe irritation or even burns. Can produce delayed pulmonary edema

Proprietary Additive(s): Prolonged or repeated contact may cause dermatitis.

Sodium Salt: Swallowing large amounts may cause stomach pains, nausea or vomiting, circulatory collapse, death

Target organs : Contains material which may cause damage to the following organs: lungs, mucous membranes, gastrointestinal tract, upper respiratory tract, skin, eye, lens or cornea.

Carcinogenicity : Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Mutagenicity : No conclusive data is available to indicate product or any component present at greater than 0.1% may cause heritable genetic effects.

Developmental effects : No conclusive data is available to indicate product or any component present at greater than 0.1% may cause developmental abnormalities.

Fertility effects : No conclusive data is available to indicate product or any component present at greater than 0.1% may impair fertility.

California Prop. 65 : **WARNING**: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.

Medical conditions aggravated by over-exposure : Pre-existing digestive disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

3. Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>% by weight</u>
Proprietary Silicates	-	50-60
Sodium hydroxide (Na(OH))	1310-73-2	5-10
Proprietary Additive(s)	-	5-10
Sodium Salt	-	1-5

Any ingredient not listed in Section 3 is non-regulated or present in the product in concentrations below legal disclosure limits.

4. First aid measures

Eye contact : Get medical attention immediately. Chemical burns must be treated promptly by a physician. Check for and remove any contact lenses. Immediately flush eyes with running water for at least 60 minutes, keeping eyelids open. Provide a readily-accessible eyewash facility and quick-drench safety shower.

Skin contact : Get medical attention immediately. In case of contact, immediately flush skin with plenty of water for at least 60 minutes while removing contaminated clothing and shoes. Provide a readily-accessible eyewash facility and quick-drench safety shower. Chemical burns must be treated promptly by a physician. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation : Get medical attention immediately. Chemical burns must be treated promptly by a physician. Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Move

Continued on next page

4. First aid measures

- affected person to fresh air. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.
- Ingestion** : Get medical attention immediately. Chemical burns must be treated promptly by a physician. Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wear suitable protective clothing, gloves and eye/face protection. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

5. Fire-fighting measures

- Flammability of the product** : No specific fire or explosion hazard.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Hazardous combustion products** : carbon oxides
phosphorus oxides
metal oxide/oxides
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Large spill** : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.
- Small spill** : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Provide a readily-accessible eyewash facility and quick-drench safety shower. Do not breathe dust. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or approved alternative container. Containers should be kept closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Provide a readily-accessible eyewash facility and quick-drench safety shower.
Keep container tightly closed. Keep container in a cool, well-ventilated area.

8. Exposure controls/personal protection

<u>Product name</u>	<u>CAS number</u>	<u>Exposure limits</u>
Sodium hydroxide (Na(OH))	1310-73-2	ACGIH TLV (United States, 1/2008). C: 2 mg/m ³ NIOSH REL (United States, 8/2008). CEIL: 2 mg/m ³ OSHA PEL (United States, 11/2008). TWA: 2 mg/m ³ 8 hour(s). OSHA PEL 1989 (United States, 3/1989). CEIL: 2 mg/m ³
Proprietary Additive(s)	-	NIOSH REL (United States, 5/2008). TWA: 5 mg/m ³ 10 hour(s). OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hour(s).
Sodium Salt	-	OSHA PEL (United States, 5/2005). TWA: 5 mg/m ³ 8 hour(s). Form: Respirable fraction

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Provide a readily-accessible eyewash facility and quick-drench safety shower. Processes should be designed to minimize airborne and skin exposure to hazardous substances.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Remove/Take off immediately all contaminated clothing. Contaminated work clothing should not be allowed out of the workplace.

Personal protection

8. Exposure controls/personal protection

- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.
- Eyes** : If operating conditions cause high dust concentrations to be produced, use dust goggles. Avoid contact with eyes. Safety eyewear should be used when there is a likelihood of exposure. Direct contact with the eyes can cause irreversible damage, including blindness.
- Skin** : Avoid contact with skin and clothing. Wear protective clothing. Body garments used should be based upon the task being performed (e.g., lab coat, chemical resistant protective suit, sleeves, synthetic apron, gauntlets) to avoid exposed skin surfaces. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

- Physical state** : Solid. [Powder.]
- Flash point** : Not available.
- Auto-ignition temperature** : Not available.
- Flammable limits** : Not available.
- Color** : White.
- Odor** : Not available.
- pH** : Not available.
- Boiling/condensation point** : Not available.
- Melting/freezing point** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Odor threshold** : Not available.
- Evaporation rate** : Not available.
- VOC** : 0.053 g/l
- Solubility** : Partially soluble in the following materials: cold water and hot water.

10. Stability and reactivity

- Stability** : The product is stable.
- Conditions to avoid** : No specific data.
- Incompatibility with various substances** : Reactive with organic materials, metals, acids.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Other Hazardous decomposition products** : carbon oxides (CO, CO₂) sodium oxides, phosphorous oxides
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Proprietary Silicates	LD50 Oral	Rat	>1000 mg/kg	-
	LD50 Oral	Rat	1153 mg/kg	-
Proprietary Additive(s)	LD Dermal	Rabbit	>300 mg/kg	-
	LD50 Dermal	Rabbit	>7940 mg/kg	-
	LD50	Rat	59 mg/kg	-
	Intraperitoneal LD50	Rat	100 mg/kg	-
	Intravenous LD50 Oral	Rat	4 g/kg	-
Sodium Salt	LD50 Oral	Rat	5400 mg/kg	-
	LD50 Oral	Rat	4090 mg/kg	-
	LC50	Rat	2300 mg/m3	2 hours
	Inhalation Vapor			

Enthone has not conducted specific studies on the toxicity of this product.

12. Ecological information

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure	
Proprietary Additive(s)	-	Acute LC50 1380000 ug/L Fresh water	Fish - Western mosquitofish - Gambusia affinis - Adult	96 hours	
	-	Acute LC50 391000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours	
	-	Acute EC50 40.38 to 47.13 mg/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate - <24 hours	48 hours	
	-	Acute LC50 198 mg/L Marine water	Fish - Guppy - Poecilia reticulata - Young - 3 to 4 weeks	96 hours	
	-	Acute LC50 33000 to 100000 ug/L Marine water	Crustaceans - Common shrimp, sand shrimp - Crangon crangon - Adult	48 hours	
	-	Acute LC50 125000 ug/L Fresh water	Fish - Western mosquitofish - Gambusia affinis - Adult	96 hours	
	-	Chronic NOEC 56 mg/L Marine water	Fish - Guppy - Poecilia reticulata - Young - 3 to 4 weeks	96 hours	
	Sodium Salt	-	Acute EC50 199.82 to 298.9 mg/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate - <24 hours	48 hours
		-	Acute LC50 1020000 to 1170000 ug/L	Daphnia - Water flea - Ceriodaphnia	48 hours

Continued on next page

12. Ecological Information

Fresh water	Acute LC50 <850000 ug/L	Fresh water	dubia - <24 hours Fish - Fathead 96 hours minnow - Pimephales promelas - 1 to 7 days
Fresh water	Acute LC50 740000 ug/L	Fresh water	Fish - Western mosquitofish - Gambusia affinis - Adult 96 hours
Fresh water	Acute LC50 585000 ug/L	Fresh water	Daphnia - Water flea - Daphnia magna 48 hours
Fresh water	Acute LC50 320000 ug/L	Fresh water	Fish - Bluegill - 96 hours Lepomis macrochirus
Fresh water	Acute LC50 300000 ug/L	Fresh water	Fish - Bluegill - 96 hours Lepomis macrochirus - 3.88 cm - 0.98 g
Fresh water	Acute LC50 265000 ug/L	Fresh water	Daphnia - Water flea - Daphnia magna 48 hours
Fresh water	Acute LC50 1640000 to 2630000 ug/L	Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours 48 hours

13. Disposal considerations


Waste disposal

: The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport Information

Regulatory Information	UN number	Proper shipping name	Classes	PG* Label	Additional information
DOT Classification	UN1823	Sodium Hydroxide, Solid, Mixture	8	II 	ERG# 154

PG* : Packing group

Continued on next page

15. Regulatory information

United States

- HCS Classification** : Corrosive material
Target organ effects
- U.S. Federal regulations** : All ingredients comply with applicable rules or orders under United States TSCA.
All components are listed or exempted.
TSCA 5(a)2 proposed significant rules: No products were found.
TSCA 5(a)2 final significant rules: No products were found.
TSCA 12(b) one-time export: No products were found.

California Prop. 65

WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.

Canada

- WHMIS (Canada)** : Class E: Corrosive material
Canada inventory : All components are listed or exempted.

International lists

- China inventory (IECSC)** : Not determined.
Europe inventory : Not determined.
Australia inventory (AICS) : Not determined.
Japan inventory (ENCS) : Not determined.
Not determined.
Korea inventory (KECI) : Not determined.
Philippines inventory (PICCS) : Not determined.

16. Other Information

Definition of Terms

ACGIH	American Conference of Governmental Industrial Hygienists
Ceiling	Maximum exposure limit defined by OSHA
CAS	Chemical Abstract Service
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
REL	Recommended Exposure Limit
RTK	Right to Know
SARA	Superfund Amendments and Reauthorization Act
STEL	Short Term Exposure Limit
TLV	ACGIH Threshold Limit Value
TLV-C	ACGIH Threshold Limit Value, Ceiling
TRADE SECRET	Claimed as allowed under 29CFR§1910.1200
TSCA	Toxic Substances Control Act
PPE	Personal Protection Equipment
CEPA	Canadian Environmental Protection Act
DSL	Domestic Substance List
NDSL	Non-Domestic Substance List
NSN	New Substance Notification Rules

Disclaimer

16. Other information

This Material Safety Data Sheet may be used to comply with OSHA's Hazard Communication Standard, 29CFR§1910.1200. This Material Safety Data Sheet may also be used to comply with the requirements of Workplace Hazardous Materials Information System, of the Controlled Products Regulations, under the Hazardous Products Act. Enthone furnishes the data contained herein in good faith without liability or legal responsibility for same whatsoever, and no warranty or guarantee, express or implied, is made with respect to such data; nor does Enthone grant permission, recommendation, or inducement to infringe any patent whether owned by Enthone or others. The data is offered solely for your information and consideration. Since conditions of use are beyond Enthone's control, user assumes all responsibility and risk.



Cookson Electronics

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

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

Generator Waste Profile

Profile #01012

GENERATOR INFORMATION

Name:

Facility Address:

City:

BILLING INFORMATION

Company Name:

Address:

Attention:

WASTE INFORMATION

Name of Waste/Common Chemical Name: Sodium hypochlorite 12.5%

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

old out dated material

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: D002

PHYSICAL CHARACTERISTICS OF WASTE

Color: <input checked="" type="checkbox"/> White/Clear <input type="checkbox"/> Black/Brown <input checked="" type="checkbox"/> Other <u>varies</u>	Suspended Solids <input checked="" type="checkbox"/> 0-1% <input type="checkbox"/> 3-5% <input type="checkbox"/> 1-3% <input type="checkbox"/> >5%	Layers: <input type="checkbox"/> Multi-Layered <input type="checkbox"/> Bi-Layered <input checked="" type="checkbox"/> Single Phase	Specific Gravity: <input type="checkbox"/> <0.8 <input type="checkbox"/> 1.0-1.2 <input type="checkbox"/> 0.8-1.0 <input type="checkbox"/> 1.3-1.4 Exact / Other <u>1.21</u>	<u>acceptable</u> <u>08.19.14</u>
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pH: NA ≤ 2 2-4 4-8 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 - 0 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
Sodium hypochlorite, see SDS	-	12.50 %		-	- %
water	-	87.5 %		-	- %
	-	%		-	- %
	-	%		-	- %
	-	%		-	- %

Metals: Indicate if this waste contains any of the following metals, if Generator knowledge-provide backup

Lab Analysis Generator Knowledge TCLP TOTAL

	Not Present	Concentration		Not Present	Concentration				
PCB	<input type="checkbox"/>	ppm	Aromatic Amine	<input type="checkbox"/>	ppm	Arsenic (As)	D004	<input type="checkbox"/>	< 5 ppm
Dioxins	<input type="checkbox"/>	ppm	Pesticides	<input type="checkbox"/>	ppm	Barium (Ba)	D005	<input type="checkbox"/>	< 100 ppm
Cyanides Reactive	<input type="checkbox"/>	ppm	Rodenticides	<input type="checkbox"/>	ppm	Cadmium (Cd)	D006	<input type="checkbox"/>	< 1 ppm
Cyanides Total	<input type="checkbox"/>	ppm	Fungicides	<input type="checkbox"/>	ppm	Chromium (Cr)	D007	<input type="checkbox"/>	< 5 ppm
Sulfides Reactive	<input type="checkbox"/>	ppm				Lead (Pb)	D008	<input type="checkbox"/>	< 5 ppm
Sulfides Total	<input type="checkbox"/>	ppm				Mercury (Hg)	D009	<input type="checkbox"/>	< 0.2 ppm
						Selenium (Se)	D010	<input type="checkbox"/>	< 1 ppm
						Silver (Ag)	D011	<input type="checkbox"/>	< 5 ppm

TCLP Organics D012 - D043 above regulatory limits: Present Not Present

IS WASTE ANY OF THE FOLLOWING?

At Least One Box Must Be Checked.

- Radioactive Water Reactive Oxidizer Shock Sensitive Reactive (other) DOT Explosives
 NIOSH Human-Positive Carcinogens NESHAP Wastes (Benzene, etc.) Biological None Apply

SHIPPING INFORMATION

1. Is this a DOT Hazardous Material (49CFR 172.101 & 173 Subpart D)? X Yes No
2. Reportable Quantity (RQ) in pounds 100
3. DOT Shipping Name UN1760, Waste Corrosive liquid, N.O.S. Hazard Class 8 UN UN1760
- PG II ERG 164 Hazardous Constituents for "n.o.s." Sodium hypochlorite
4. Method of Shipment: Bulk Tanker Vac truck Rail Car X Drums X Totes
5. Number of Units to Ship Now: 24 6. Anticipated Volume / Units per Year: _____ or X One Time
6. Special Handling Requirements including PPE: _____

CERTIFICATION STATEMENT

I hereby represent and warrant that I have personally examined and am familiar with the information contained and submitted in this and all attached documents. Based on my inquiry and personal knowledge of those individuals responsible for supplying or obtaining the information, the information contained herein is true, accurate, and complete to the best of my knowledge and belief. Furthermore, no material fact has been omitted as to make this information misleading. I understand that others may rely on this representation and warranty in the handling and processing of the waste material described herein. If this box is checked , I request Environmental Geo-Technologies not to correct any inconsistencies. Any corrections Environmental Geo-Technologies makes will be consistent with the results of the sample characterization and analysis.

Printed Name: _____

Generator's Signature: _____

GENERATOR'S CHAIN OF CUSTODY RECORD INSTRUCTIONS: PLEASE collect a representative 1-quart sample of the waste described in the above referenced GENERATOR'S WASTE PROFILE REPORT using an appropriate container. A representative sample is one obtained using any of the applicable sampling methods cited in 40 CFR 261-Appendix 1. Fill in the sampling information in the spaces provided below. If you have problems obtaining a representative sample of your waste, please contact your Environmental Geo-Technologies representative.

1. _____ 2. _____
 SAMPLING METHOD COLLECTION POINT
3. _____
 SAMPLE COLLECTOR'S NAME, TITLE, EMPLOYER
4. Sample No. _____ Preservation: Yes No



5. CHAIN OF CUSTODY Each person who handles the sample must sign below when the sample passes from one to another.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
_____	_____	_____	_____	_____	_____



Safety Data Sheet

Revision Date Mar-06-2015

Item # 11934

Safety Data Sheet 1522

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name PVS Nolwood Sodium Hypochlorite 12.5% Solution
UN/ID No. UN1791
Synonyms Bleach
Recommended Use USE ACCORDING TO PACKAGE LABEL INSTRUCTIONS
Uses advised against IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PESTICIDE IN A MANNER INCONSISTENT WITH ITS LABELING. SEE THE FULL LABEL FOR DETAILS.



Company Name
 PVS-Nolwood Chemicals, Inc
 10900 Harper Ave.
 Detroit, MI 48213
 (800) 284-9735

24 Hour Emergency Phone Number CHEMTREC 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

Emergency Overview

DANGER

Hazard statements

Precautionary Statements

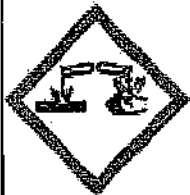
Physical hazards

Hazards to humans and domestic animals:

CORROSIVE, May cause severe skin and eye irritation or chemical burns to broken skin. Causes eye damage. Do not get in eyes, on skin or clothing. Wear safety glasses or goggles and rubber gloves when handling this product. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Avoid breathing vapors.

Physical hazards ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

Physical hazards PHYSICAL OR CHEMICAL HAZARDS STRONG OXIDIZING AGENT: Mix only with water according to label directions. Mixing this product with chemicals (e.g. ammonia, acids, detergents, etc.) or organic matter (e.g. urine feces, etc.) will release chlorine gas, which is irritating to eyes, lungs, and mucous membranes. Vacate poorly ventilated areas as soon as possible. Do not return until odors have dissipated.



Precautionary statements

Prevention

- Do not breathe dust/fume/gas/mist/vapors/spray
- Wash face, hands and any exposed skin thoroughly after handling
- Wear protective gloves/protective clothing/eye protection/face protection

Item # 11934 PVS Nolwood Sodium Hypochlorite 12.5% Solution

Response

- Immediately call a POISON CENTER or doctor/physician
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- IF SWALLOWED: Rinse mouth. DO NOT induce vomiting
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- Store locked up
- Dispose of contents/container to an approved waste disposal plant

Storage
Disposal

Hazards not otherwise classified (HNOC)

None known.

Other Information
Other hazards

- HAZARDS TO HUMANS AND DOMESTIC ANIMALS
- DANGER: Corrosive. May cause severe skin and eye irritation or chemical burns to broken skin. Causes eye damage. Do not get in eyes, on skin or clothing. Wear safety glasses or goggles and rubber gloves when handling this product. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Avoid breathing vapors.
- ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.
- PHYSICAL OR CHEMICAL HAZARDS
- STRONG OXIDIZING AGENT: Mix only with water according to label directions. Mixing this product with chemicals (e.g. ammonia, acids, detergents, etc.) or organic matter (e.g. urine feces, etc.) will release chlorine gas, which is irritating to eyes, lungs, and mucous membranes. Vacate poorly ventilated areas as soon as possible. Do not return until odors have dissipated.

Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	EC No.	Weight %
Water	7732-18-5	231-791-2	87.5
Sodium hypochlorite	7881-52-9	231-868-3	12.5

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

General advice

- Keep out of reach of children

Eye contact

- IF IN EYES
- Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a Poison Control Center or doctor for treatment advice.

Skin Contact

IF ON SKIN OR CLOTHING: • Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a Poison Control Center or doctor for treatment advice.

Item # 11934 PVS Nolwood Sodium Hypochlorite 12.5% Solution

Inhalation	<ul style="list-style-type: none">• Remove to fresh air• Call a physician or poison control center immediately• If not breathing, give artificial respiration• If breathing is difficult, give oxygen
Ingestion	IF SWALLOWED: • Call a Poison Control Center or doctor immediately for treatment advice. Have person drink large amounts of water. Do not induce vomiting unless told to do so by the Poison Control Center or a doctor. Do not give anything by mouth to an unconscious person. Have the product container or label with you when calling a Poison Control Center or doctor, or going for treatment. For emergency information on product, Call your poison control center at 1-800-222-1222.
Note to physician	Probable mucosal damage may contraindicate the use of gastric lavage.
Self-protection of the first aider	Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media	<ul style="list-style-type: none">• Dry chemical, CO2, water spray or alcohol-resistant foam• Use extinguishing measures that are appropriate to local circumstances and the surrounding environment
Unsuitable extinguishing media	<ul style="list-style-type: none">• Caution: Use of water spray when fighting fire may be inefficient• Do not use a solid water stream as it may scatter and spread fire
Specific hazards arising from the chemical	<ul style="list-style-type: none">• The product causes burns of eyes, skin and mucous membranes• Thermal decomposition can lead to release of irritating and toxic gases and vapors• In the event of fire and/or explosion do not breathe fumes
Protective equipment and precautions for firefighters	<ul style="list-style-type: none">• Wear a self-contained breathing apparatus and chemical protective clothing
Flammable properties	<ul style="list-style-type: none">• No information available
Explosive properties	<ul style="list-style-type: none">• No information available

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	<ul style="list-style-type: none">• Use personal protective equipment as required• Evacuate personnel to safe areas• Avoid contact with skin, eyes or clothing
Environmental precautions	<ul style="list-style-type: none">• Keep people away from and upwind of spill/leak• For small spills, absorb material with clay absorbent or other compatible material. Dispose of the waste material according to local, state and governmental requirements.• For large spills, contain the material using barriers of absorbent pigs, clay absorbent or earth dams.
Methods for cleaning up	<ul style="list-style-type: none">• Soak up with inert absorbent material• Clean contaminated surface thoroughly• Dike far ahead of liquid spill for later disposal• Take up mechanically, placing in appropriate containers for disposal• Prevent product from entering drains• Dam up• After cleaning, flush away traces with water
Other information	<ul style="list-style-type: none">• No information available

7. HANDLING AND STORAGE

Advice on safe handling	<ul style="list-style-type: none">• Use personal protective equipment as required• Ensure adequate ventilation, especially in confined areas• Avoid contact with skin, eyes or clothing• In case of insufficient ventilation, wear suitable respiratory equipment• Use only with adequate ventilation and in closed systems
--------------------------------	---

Item # 11934 PVS Nolwood Sodium Hypochlorite 12.5% Solution

Storage Conditions

- **STORAGE AND DISPOSAL:**
- **PESTICIDE STORAGE:** Do not contaminate food or feed by storage, disposal, or cleaning of equipment. Store this product in a cool dry area, away from direct sunlight and heat to avoid deterioration. In case of spill, flood areas with large quantities of water.
- **PESTICIDE DISPOSAL:** Product or Rinsate that cannot be used must be diluted with water before disposal in a sanitary sewer.
- **CONTAINER HANDLING; REFILLABLE CONTAINER:** Refill this container with sodium hypochlorite, only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate the container vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. **NON-REFILLABLE CONTAINER, 5 GALLONS OR LESS:** Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill container 1/4 full with water and recap. Shake container for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

Incompatible materials

Incompatible with strong acids and bases, Incompatible with oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Respiratory protection

• A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant the use of a respirator.

Eye/face protection

- Tight sealing safety goggles
- Face protection shield

Skin and body protection

- Wear suitable protective clothing
- Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact

General Hygiene Considerations

- When using do not eat, drink or smoke
- Wash contaminated clothing before reuse
- Keep away from food, drink and animal feeding stuffs
- Contaminated work clothing should not be allowed out of the workplace
- Regular cleaning of equipment, work area and clothing is recommended
- Avoid contact with skin, eyes or clothing
- Take off all contaminated clothing and wash it before reuse
- Wear suitable gloves and eye/face protection

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Aque
Appearance	No information available
Color	colorless or slight yellow, yellow green
Odor	Chlorine
Odor threshold	No information available

Item # 11934 PVS Nolwood Sodium Hypochlorite 12.5% Solution

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<u>pH</u>	12	10% w/w with D.I. water
Melting point/Freezing Point	No information available	
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit (%)	No information available	
Lower flammability limit (%)	No information available	
Vapor pressure	1.6	
Vapor density	No information available	
Specific Gravity	1.2	
Water solubility	Miscible in water	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	
<u>Other Information</u>		
Softening point °C	No information available	
Molecular weight	No information available	
VOC Content (%)	No information available	
Density	No information available	
Bulk density	10.0914 Pounds per gallon (lb/gal)	

10. STABILITY AND REACTIVITY

<u>Stability</u>	Stable under recommended storage conditions.
<u>Conditions to avoid</u>	• Exposure to air or moisture over prolonged periods
<u>Incompatible materials</u>	• Incompatible with strong acids and bases. • Incompatible with oxidizing agents.

Hazardous Decomposition Products • Thermal decomposition can lead to release of irritating and toxic gases and vapors

Possibility of Hazardous Reactions • None under normal processing and storage

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principle Routes of Exposure	Inhalation Skin Contact Eye contact
Inhalation	May cause irritation of respiratory tract. Avoid breathing vapors or mists.
Ingestion	No data available.
Skin Contact	No data available.
Eye contact	Contact with eyes may cause irritation.

<u>Chemical Name</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Inhalation LC50</u>
Sodium hypochlorite 7881-52-9	= 8200 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	-

Information on toxicological effects

Symptoms	No information available
Delayed and immediate effects as well as chronic effects from short and long-term exposure	

Item # 11934 PVS Nolwood Sodium Hypochlorite 12.5% Solution

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sodium hypochlorite 7681-52-9	-	Group 3	-	-

*IARC (International Agency for Research on Cancer)
 Not classifiable as a human carcinogen*

Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Chronic toxicity Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure.
Aspiration hazard Possible risk of irreversible effects.
 No information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity
 The following values are calculated based on chapter 3.1 of the GHS document . mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity Very toxic to aquatic life with long lasting effects
 0% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Sodium hypochlorite 7681-52-9	-	0.28 - 1: 96 h <i>Lepomis macrochirus</i> mg/L LC50 flow-through 0.05 - 0.771: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through 0.4 - 0.8: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 4.5 - 7.6: 96 h <i>Pimephales promelas</i> mg/L LC50 static 0.06 - 0.11: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through 0.03 - 0.19: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 semi-static 0.18 - 0.22: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static	0.033 - 0.044: 48 h <i>Daphnia magna</i> mg/L EC50 Static

Persistence and degradability No information available.
Bioaccumulation No information available.

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Disposal of wastes • Dispose of in accordance with federal, state and local regulations
 • Dispose of hazardous waste in a RCRA licensed facility
Contaminated packaging • Do not reuse container
US EPA Waste Number 2002

14. TRANSPORT INFORMATION

DOT
Proper shipping name Hypochlorite solutions
Hazard Class 8

Item # 11934 PVS Nolwood Sodium Hypochlorite 12.5% Solution

UNID No. UN1791
 Packing Group III
 Reportable Quantity (RQ) (lbs) 100
 RQ as is (lbs) 800
 Description UN1791, Hypochlorite solutions, 8, III,
 Special Provisions IB3, N34, T4, TP2, TP24
 Emergency Response Guide Number 154

IATA

UNID No. UN1791
 Proper shipping name HYPOCHLORITE SOLUTION
 Hazard Class 8
 Packing Group III
 ERG Code 8L
 Special Provisions A3

IMDG

UNID No. UN1791
 Proper shipping name HYPOCHLORITE SOLUTION
 Hazard Class 8
 Packing Group III
 EmS-No. F-A, S-B
 Special Provisions 223

15. REGULATORY INFORMATION

US Federal Regulations

SARA 311/312 Hazard Categories

Acute health hazard Yes
 Chronic Health Hazard Yes
 Fire hazard Yes
 Sudden release of pressure hazard No
 Reactive Hazard No

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hypochlorite 7681-52-9	100 lb	-	-	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ) (lbs)
Sodium hypochlorite 7681-52-9	100 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Sodium hypochlorite 7681-52-9	X	X	X

Item # 11934 PVS Nolwood Sodium Hypochlorite 12.5% Solution

U.S. EPA Label Information

EPA Pesticide Registration Number EPA Est. No. 62255-MI-001
EPA Pesticide Label EPA Reg. No. 62255-20001

International Inventories

TSCA Complies
DSL/NDSL Complies
EINECS/ELINCS Complies
ENCS Does not comply
IECSC Complies
KECL Complies
PICCS Complies
AICS Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

16. OTHER INFORMATION

NFPA	Health hazards 3	Flammability 0	Instability 1	Physical and Chemical Properties OX
HMS	Health hazards 3	Flammability 0	Physical hazards 1	Personal protection D

Item # 11934
Safety Data Sheet 1522
Revision Date Mar-06-2015
Issue Date Mar-06-2015
Version 1.01
Revision Note *** Updated value on SDS.

Disclaimer

All information, statements, data, advice, and/or recommendations, including, without limitation, those relating to storage, loading/unloading, piping, and transportation (collectively referred to herein as "Information") are believed to be accurate, reliable, and based on reliable industry and regulatory references. However, no representation or warranty, express or implied, is made as to its completeness, accuracy, fitness for a particular purpose or any other matter, including, without limitation, that the practice or application of any such information is free of patent infringement or other intellectual property misappropriation. The Company providing this SDS is not engaged in the business of providing technical, operational, engineering, or safety information for a fee, and therefore, any such information provided herein has been furnished as an accommodation and without charge. All information provided herein is intended for use by persons having requisite knowledge, skill, and experience in the chemical industry. The Company providing this SDS shall not be responsible or liable for the use, application, or implementation of the information provided herein, and all such information is to be used at the risk, and in the sole judgment and discretion of such persons, their employees, advisors, and agents. This safety data sheet (SDS) is offered for your information, consideration, and investigation as required by federal hazardous products act and related legislation.

End of Safety Data Sheet

**WASTE STREAMS
CHARACTERIZATIONS**

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

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

Generator Waste Profile

Profile # 01014

GENERATOR INFORMATION

Name

Facility

City

Contact

BILLING INFORMATION

(SAMPLES ABOVE)

Company

Address

City

Attention

WASTE INFORMATION

Name of Waste/Common Chemical Name:

Zinc Phosphate Bath w/ Rinse Water

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

Spent acid solution use for zinc phosphating process.

Material is not from a WWTP process.

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: D002

PHYSICAL CHARACTERISTICS OF WASTE

Color: <input type="checkbox"/> White/Clear <input type="checkbox"/> Black/Brown <input checked="" type="checkbox"/> Other <u>Green</u>	Suspended Solids: <input type="checkbox"/> 0-1% <input type="checkbox"/> 3-5% <input type="checkbox"/> 1-3% <input type="checkbox"/> >5%	Layers: <input type="checkbox"/> Multi-Layered <input type="checkbox"/> Bi-Layered <input checked="" type="checkbox"/> Single Phase	Specific Gravity: <input type="checkbox"/> <0.8 <input 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> <u>08/16/16</u>
---	---	---	--	--

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 - 0 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>32</u>	<u>45</u>			
<u>Phosphoric Acid (15%)</u>	<u>15</u>	<u>35</u>			
<u>Nitric Acid (42 deg)</u>	<u>5</u>	<u>15</u>			
<u>zinc oxide</u>	<u>2</u>	<u>15</u>			
<u>Nickel Nitrate</u>	<u>0.1</u>	<u>1</u>			

RUSH

Date: 8/16/16

CHAIN-OF-CUSTODY RECORD

ITEM #	SAMPLE LD.	DATE SAMPLED	TIME	SAMPLE DESCRIPTION	MATRIX	COMP	GRAB	NUMBER OF CONTAINERS	REMARKS
1	08152016Z	8/15/16	2140pm	Zinc Phosphate Acid	L		X	1	
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									

PROJECT NO.

PROJECT NAME
Zinc Phos Acid - Labtech

LABORATORY NAME

SPECIAL INSTRUCTIONS:

RELINQUISHED BY: [Redacted]

RECEIVED BY: [Redacted]

RELINQUISHED FOR LAB BY: [Redacted]

RECEIVED FOR LAB BY: [Redacted]

RELINQUISHED FOR LAB BY: [Redacted]

RECEIVED BY: [Redacted]

FINGERPRINT FORM

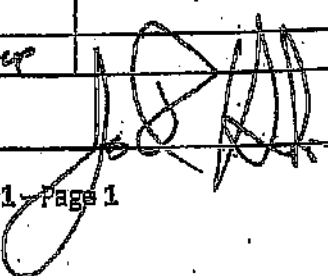
11110

01014

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/16/16
Receiving ID#	Zinc Phos Acid
Manifest#	Line:
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	[Redacted]
Client	[Redacted]
Transporter	
Time In	
Time out	
Received by	J.H.
Sampled by	Client

Compatible? (RT#)	<input checked="" type="radio"/> Yes <input type="radio"/> No	Barium	
PCBs (ppm)(Oily Waste Only)?	N/A	Calcium	
TCC (ppm)(CC Waste Only)?	N/A	Total Iron	
Flash Point (°F)	>100	Magnesium	
pH (S.U.)	10.1	Sodium Chloride	
Cyanides? (mg/L)	230	Bicarbonate	
Sulfides? (ppm)	2200	Carbonate	
Specific Gravity	1.50	TDS	
Physical Description	liquid	Resistivity	
Stream Consistency	<input checked="" type="radio"/> Yes <input type="radio"/> No	Sulfate	
Oil in Sample	Yes <input type="radio"/> No <input checked="" type="radio"/>		
Temperature	74°F		
Conductivity	87.4 mS		
% Solids	15.2		
Turbidity	Yes <input type="radio"/> No <input checked="" type="radio"/>		
Color (visual)	Green		
TSS (%)	10.1		
Radiation Screen (as needed)	Negative		
Lab Signature			

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

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

Generator Waste Profile

Profile # **91015**

GENERATOR INFORMATION

Name: _____

Facility: _____

City: _____

Contact: _____

BILLING INFORMATION

NAME AS ABOVE

Company Name: _____

Address: _____

City: _____

State: _____

Zip Code: _____

Attention: _____

Phone: () _____

Fax: () _____

WASTE INFORMATION

Name of Waste/Common Chemical Name:

WASTE WATER CONDENSATE FROM BIOGAS PROCESSING

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

CHILLING AND COOLING OF BIOGAS FROM A LANDFILL TO PROCESS IT TO MEET PIPELINE STANDARDS

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: **D004**

PHYSICAL CHARACTERISTICS OF WASTE

Color: <input checked="" type="checkbox"/> White/Clear <input type="checkbox"/> Black/Brown <input type="checkbox"/> Other _____	Suspended Solids: <input checked="" type="checkbox"/> 0-1 % <input type="checkbox"/> 3-5 % <input type="checkbox"/> 1-3 % <input type="checkbox"/> > 5%	Layers: <input type="checkbox"/> Multi-Layered <input type="checkbox"/> Bi-Layered <input checked="" type="checkbox"/> Single Phase	Specific Gravity: <input type="checkbox"/> <0.8 <input type="checkbox"/> 1.0-1.2 <input checked="" type="checkbox"/> 0.8-1.0 <input type="checkbox"/> 1.3-1.4 Exact / Other _____	<i>acceptable</i> <i>08.24.16</i>
--	--	---	---	--------------------------------------

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 - **< 50 ppm** 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
WATER	100	100			

6/13/2016

Ref: Analytical Testing
Lab Report Number: 16-160-0317
Client Project Description: Analytical Testing

Waypoint Analytical, Inc. received sample(s) on 6/8/2016 for the analyses presented in the following report.

The above referenced project has been analyzed per your instructions. The analyses were performed in accordance with the applicable analytical method.

The analytical data has been validated using standard quality control measures performed as required by the analytical method. Quality Assurance, method validations, instrumentation maintenance and calibration for all parameters (NELAP and non-NELAP) were performed in accordance with guidelines established by the USEPA (including 40 CFR 136 Method Update Rule May 2012) and NELAC unless otherwise indicated. Any parameter for which the laboratory is not officially NELAP accredited is indicated by a '~' symbol. These are not included in the scope because NELAP accreditation is either not available or has not been applied for. Additional certifications may be held/are available for parameters, where NELAP accreditation is not required or applicable. A full list of certifications is available upon request.

Certain parameters (chlorine, pH, dissolved oxygen, sulfite...) are required to be analyzed within 15 minutes of sampling. Usually, but not always, any field parameter analyzed at the laboratory is outside of this holding time. Refer to sample analysis time for confirmation of holding time compliance.

The results are shown on the attached Report of Analysis(s). Results for solid matrices are reported on an as-received basis unless otherwise indicated. This report shall not be reproduced except in full and relates only to the samples included in this report.

Please do not hesitate to contact me or client services if you have any questions or need additional information.

Sincerely,



Randy Thomas
Project Manager

Laboratory's liability in any claim relating to analyses performed shall be limited to, at laboratory's option, repeating the analysis in question at laboratory's expense, or the refund of the charges paid for performance of said analysis.

Alabama #A0750
Mississippi
Kentucky #B0047

Louisiana #L04015
California #C0404
Tennessee #TN02027

VA NELAP #400181
NC #415
EPA #TN00012

Texas #T104704180-11-5
Oklahoma 49311
Kentucky UST #41

Arkansas #BS-0650
Virginia #00106
Kansas #E-0396





04729

Project ID :
 Project Analytical Testing
 Information :

Report Date : 06/13/2016
 Received : 6/8/2016

Report Number: 16-160-0317

REPORT OF ANALYSIS

Lab No : 90920
 Sample ID : Grab

Matrix: Aqueous
 Sampled: 6/8/2016 12:55

Test	Results	Units	MDL	DF	Date / Time Analyzed	By	Analytical Method
TCLP Herbicide Extraction	Filtrate			1	06/09/16 14:46	SAJ	SW-1311
TCLP Pesticide Extraction	Filtrate			1	06/09/16 14:46	SAJ	SW-1311
TCLP VOC ZHE Extraction	Filtrate			1	06/09/16 14:49	SAJ	SW-1311 (ZHE)
TCLP Metals Extraction	Filtrate			1	06/09/16 14:46	SAJ	SW-1311
TCLP SVOC Extraction	Filtrate			1	06/09/16 14:46	SAJ	SW-1311

Analytical Method: 6010C
 Prep Method: 3005A

Prep Batch(es): L290393 06/10/16 09:25

Test	Results	Units	MDL	DF	Date / Time Analyzed	By	Analytical Batch
TCLP Arsenic	8.37	mg/L	0.025	1	06/11/16 23:49	CCR	L290604
TCLP Barium	0.051	mg/L	0.025	1	06/11/16 23:49	CCR	L290604
TCLP Cadmium	<0.005	mg/L	0.005	1	06/11/16 23:49	CCR	L290604
TCLP Chromium	<0.010	mg/L	0.010	1	06/13/16 16:20	CCR	L290652
TCLP Lead	<0.010	mg/L	0.010	1	06/11/16 23:49	CCR	L290604
TCLP Selenium	<0.050	mg/L	0.050	1	06/11/16 23:49	CCR	L290604
TCLP Silver	<0.005	mg/L	0.005	1	06/13/16 16:20	CCR	L290652

Qualifier/Definitions	DF	Dilution Factor	MDL	Method	Quantitation Limit
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Project ID :
 Project Analytical Testing
 Information :

Report Date : 06/13/2016
 Received : 6/8/2016

Report Number : 16-160-0317

REPORT OF ANALYSIS

Lab No : 90920
 Sample ID : Grab

Matrix: Aqueous
 Sampled: 6/8/2016 12:55

Analytical Method: 7470A Prep Batch(es): L290319 06/10/16 09:00
 Prep Method: 7470A

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
TCLP Mercury	<0.0200	mg/L	0.0200	1	06/10/16 19:28	KKM	L290422

Analytical Method: 8081A Prep Batch(es): L290290 06/10/16 08:15
 Prep Method: 3510C

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
TCLP Endrin	<0.001600	mg/L	0.001600	10	06/11/16 19:09	VIC	L290585
TCLP gamma-BHC	<0.001600	mg/L	0.001600	10	06/11/16 19:09	VIC	L290585
TCLP Methoxychlor	<0.001600	mg/L	0.001600	10	06/11/16 19:09	VIC	L290585
TCLP Toxaphene	<0.01200	mg/L	0.01200	10	06/11/16 19:09	VIC	L290585
TCLP Chlordane	<0.008000	mg/L	0.008000	10	06/11/16 19:09	VIC	L290585
TCLP Heptachlor Epoxide	<0.001600	mg/L	0.001600	10	06/11/16 19:09	VIC	L290585
TCLP Heptachlor	<0.001600	mg/L	0.001600	10	06/11/16 19:09	VIC	L290585

Surrogate: Decachlorobiphenyl 62.71 Limits: 36-116% 10 06/11/16 19:09 VIC L290585
 Surrogate: Tetrachloro-m-xylene 36.00 Limits: 25-123% 10 06/11/16 19:09 VIC L290585

Analytical Method: 8151A Prep Batch(es): L290284 06/10/16 07:30
 Prep Method: 8151A

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
TCLP 2,4-D	<0.0200	mg/L	0.0200	1	06/11/16 16:13	VIC	L290578

Qualifiers/ Definitions	DF	Dilution Factor	MQL	Method Quantitation Limit
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04729



Project ID :
 Project Analytical Testing
 Information :

Report Date : 06/13/2016
 Received : 6/8/2016

Report Number : 16-150-0317

REPORT OF ANALYSIS

Lab No : 99920
 Sample ID : Grab

Matrix: Aqueous
 Sampled: 6/8/2016 12:55

Analytical Method: 8151A
 Prep Method: 8151A

Prep Batch(es): L290284 05/10/16 07:30

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
TCLP 2,4,5-TP (Silvex)	<0.0020	mg/L	0.0020	1	06/11/16 16:13	VIC	L290578

Surrogate: DCAA

34.40 Limits: 20-120% 1 06/11/16 16:13 VIC L290578

Analytical Method: 8260B
 Prep Method: 5030B

Prep Batch(es): L290555 05/10/16 10:41 L290645 05/13/16 08:31

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
TCLP Benzene	0.110	mg/L	0.0100	1	06/10/16 15:09	AGH	L290582
TCLP Carbon Tetrachloride	<0.0100	mg/L	0.0100	1	06/10/16 15:09	AGH	L290582
TCLP Chlorobenzene	0.0307	mg/L	0.0100	1	06/10/16 15:09	AGH	L290582
TCLP Chloroform	<0.0100	mg/L	0.0100	1	06/10/16 15:09	AGH	L290582
TCLP 1,4-Dichlorobenzene	0.342	mg/L	0.0100	1	06/10/16 15:09	AGH	L290582
TCLP 1,2-Dichloroethane	<0.0100	mg/L	0.0100	1	06/10/16 15:09	AGH	L290582
TCLP 1,1-Dichloroethane	<0.0100	mg/L	0.0100	1	06/10/16 15:09	AGH	L290582
TCLP Methyl Ethyl Ketone (MEK)	59.7	mg/L	20.0	100	06/13/16 14:21	AGH	L290646
TCLP Tetrachloroethane	<0.0100	mg/L	0.0100	1	06/10/16 15:09	AGH	L290582
TCLP Trichloroethane	<0.0100	mg/L	0.0100	1	06/10/16 15:09	AGH	L290582

Qualifiers/
 Definitions

DF

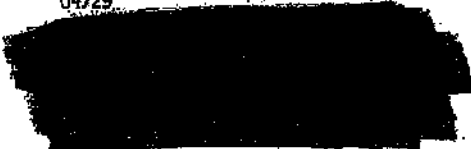
Dilution Factor

MQL

Method Quantitation Limit



04729



Project ID :
 Project Analytical Testing
 Information :

Report Date : 06/13/2016
 Received : 6/8/2016

Report Number : 16-160-0317

REPORT OF ANALYSIS

Lab No : 90920
 Sample ID : Grab

Matrix: Aqueous
 Sampled: 6/8/2016 12:55

Analytical Method: 8260B Prep Batch(es): L290555 06/10/16 10:41 L290645 06/13/16 08:31
 Prep Method: 5030B

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
TCLP Vinyl Chloride	<0.0100	mg/L	0.0100	1	06/10/16 15:09	AGH	L290582
Surrogate: 4-Bromofluorobenzene	107		Limits: 71-137%	1	06/10/16 15:09	AGH	L290582
Surrogate: Dibromofluoromethane	88.0		Limits: 70-128%	1	06/10/16 15:09	AGH	L290582
Surrogate: 1,2-Dichloroethane - d4	94.6		Limits: 63-136%	1	06/10/16 15:09	AGH	L290582
Surrogate: Toluene-d8	83.4		Limits: 70-130%	1	06/10/16 15:09	AGH	L290582
Surrogate: 4-Bromofluorobenzene	110		Limits: 71-137%	100	06/13/16 14:21		L290646
Surrogate: Dibromofluoromethane	102		Limits: 70-128%	100	06/13/16 14:21		L290646
Surrogate: 1,2-Dichloroethane - d4	92.6		Limits: 63-136%	100	06/13/16 14:21		L290646
Surrogate: Toluene-d8	97.0		Limits: 70-130%	100	06/13/16 14:21		L290646

Analytical Method: 8270C Prep Batch(es): L290598 06/13/16 09:00
 Prep Method: 3510C

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
TCLP 2-Methylphenol	<0.100	mg/L	0.100	5	06/13/16 14:22	RQE	L290647
TCLP 3,4-Methylphenol	8.31	mg/L	0.800	20	06/13/16 15:45	RQE	L290647
TCLP 2,4-Dinitrotoluene	<0.100	mg/L	0.100	5	06/13/16 14:22	RQE	L290647
TCLP Hexachlorobenzene	<0.100	mg/L	0.100	5	06/13/16 14:22	RQE	L290647
TCLP Hexachlorobutadiene	<0.100	mg/L	0.100	5	06/13/16 14:22	RQE	L290647
TCLP Hexachloroethane	<0.100	mg/L	0.100	5	06/13/16 14:22	RQE	L290647
TCLP Nitrobenzene	<0.100	mg/L	0.100	5	06/13/16 14:22	RQE	L290647
TCLP Pentachlorophenol	<0.200	mg/L	0.200	5	06/13/16 14:22	RQE	L290647
TCLP Pyridine	2.24	mg/L	0.100	5	06/13/16 14:22	RQE	L290647

Qualifiers/ Definitions DF Dilution Factor MQL Method Quantitation Limit

04729

Project ID :
Project Analytical Testing
Information :

Report Date : 06/13/2016
Received : 6/8/2016

Report Number : 15-160-0317

REPORT OF ANALYSIS

Lab No : 90920
Sample ID : Grab

Matrx: Aqueous
Sampled: 6/8/2016 12:55

Analytical Method: 8270C Prep Batch(es): L290599 06/13/16 09:00
Prep Method: 3510C

Test	Results	Units	MQL	QF	Date / Time Analyzed	By	Analytical Batch
TCLP 2,4,5-Trichlorophenol	<0.100	mg/L	0.100	5	06/13/16 14:22	RQE	L290647
TCLP 2,4,6-Trichlorophenol	<0.100	mg/L	0.100	5	06/13/16 14:22	RQE	L290647
Surrogate: TCLP 2,4,6-Tribromophenol	97.1		Limits: 40-125%	5	06/13/16 14:22		L290647
Surrogate: TCLP 2-Fluorobiphenyl	71.8		Limits: 38-107%	5	06/13/16 14:22		L290647
Surrogate: TCLP 2-Fluorophenol	66.0		Limits: 20-110%	5	06/13/16 14:22		L290647
Surrogate: TCLP 4-Terphenyl-d14	89.0		Limits: 33-122%	5	06/13/16 14:22		L290647
Surrogate: TCLP Nitrobenzene-d5	87.5		Limits: 29-110%	5	06/13/16 14:22		L290647
Surrogate: TCLP Phenol-d6	36.9		Limits: 10-115%	5	06/13/16 14:22		L290647

Qualifiers/ Definitions	DF	Dilution Factor	MQL	Method Quantitation Limit
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Cooler Receipt Form

Customer Number: 04729

Customer Name: [REDACTED]

Report Number: [REDACTED]

Shipping Method

Fed Ex US Postal Lab Other : _____
 UPS Client Courier Thermometer ID: #7

Shipping container/cooler uncompromised?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Number of coolers received	1		
Custody seals intact on shipping container/cooler?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> Not Required
Custody seals intact on sample bottles?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> Not Required
Chain of Custody (COC) present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
COC agrees with sample label(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
COC properly completed	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Samples in proper containers?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sample containers intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sufficient sample volume for indicated test(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
All samples received within holding time?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Cooler temperature in compliance?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Cooler/Samples arrived at the laboratory on ice. Samples were considered acceptable as cooling process had begun.	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Water - Sample containers properly preserved	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
Water - VOA vials free of headspace	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Trip Blanks received with VOAs	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Soil VOA method 5035 - compliance criteria met	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
High concentration container (48 hr)	Low concentration EnCore samplers (48 hr)		
High concentration pre-weighed (methanol -14 d)	Low conc pre-weighed vials (Sod Bis -14 d)		
Special precautions or instructions included?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	

Comments:

Any regulatory non-compliance issues will be recorded on non-compliance report.

Signature: Danyale Love

Date & Time: 06/08/2016 16:14:36



2790 Whitten Road, Memphis, TN 38133
 Main 901.213.2400 • Fax 901.213.2440

CHAIN-OF-CUSTODY

15-160-0317
 04729
 06-08-2016
 16.11.17
 Clean Harbors Env Services, Inc.
 Analytical Testing

Company Name	Company Number	Client Project Manager/Contact	Purchase Order Number
[REDACTED]			W160709715
Site Name	Project Number	<input checked="" type="checkbox"/> RUSH - Additional charges apply <input type="checkbox"/> Special Detection Limits(s) Date Results Needed:	Method of Shipment <input type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Courier <input checked="" type="checkbox"/> Client Drop Off Other
TCLP	CERF		
LEMS Project ID	[REDACTED]		

Date	Time	Sample ID	Matrix	Grab/Comp	Cont	Container Type	Preservation	Analyses
6/7/16	12:55 pm	1	Aqueous		1	Plastic - Pint	NONE	TCLP RCRA 8 Metals
6/7/16	12:55 pm	2, 3, 4	Aqueous		3	Glass Vial Amber - 40ml	NONE	TCLP VOC
6/7/16	12:55 pm	5, 6, 7	Aqueous		3	Glass Amber - Liter	NONE	TCLP SVOC/Herbs/Pest

For Laboratory Use Only			Sampled By: [REDACTED]	Client Remarks/Comments: [REDACTED]
Ice	Custody Seals	Lab Comments	[REDACTED]	
Y/N	Y/N			
Start/Cooler Temp			Relinquished by: (SIGNATURE)	Date Time
2.1°C LT7			Relinquished by: (SIGNATURE)	Date Time
			Received by: (SIGNATURE)	Date Time
			Received by: (SIGNATURE)	Date Time



The Environmental Quality Company
 Detroit Laboratory
 1923 Frederick Street
 Detroit, MI 48211-2603

LAB SAMPLE RESULTS

Sample ID: DE15922

Generator: [REDACTED]

EQ Tracking: [REDACTED]

Waste Description: [REDACTED]

Waste Matrix: [REDACTED]

Report Date: [REDACTED]

Total Metals for Chem-Pre

Analyte Name	Result	Reporting Limit	Regulatory Limit	Units	Analysis Date
Antimony	1.5	0.05	0.249	mg/L	08/10/2016
Arsenic	7.1	0.10	0.162	mg/L	08/10/2016
Barium	Less Than	0.05		mg/L	08/10/2016
Cadmium	Less Than	0.03	0.474	mg/L	08/10/2016
Chromium	Less Than	0.05	0.947	mg/L	08/10/2016
Cobalt	Less Than	0.10	0.192	mg/L	08/10/2016
Copper	Less Than	0.05	0.405	mg/L	08/10/2016
Iron	16	0.10	1000	mg/L	08/10/2016
Lead	Less Than	0.05	0.222	mg/L	08/10/2016
Mercury	Less Than	0.0002	0.0002	mg/L	08/10/2016
Nickel	Less Than	0.10	3.95	mg/L	08/10/2016
Selenium	Less Than	0.10		mg/L	08/10/2016
Silver	Less Than	0.03	0.120	mg/L	08/10/2016
Flu	Less Than	0.10	0.409	mg/L	08/10/2016
Titanium	Less Than	0.05	0.0947	mg/L	08/10/2016
Vanadium	Less Than	0.05	0.218	mg/L	08/10/2016
Zinc	Less Than	0.05	2.87	mg/L	08/10/2016

Validated By:

James C. Bahen

James C. Bahen
 Lab Supervisor

GENERATOR INFORMATION:

Name: _____

Facility: _____

City: _____

Contact: _____

BILLING INFO:

Company Name: _____

Address: _____

City: _____

Attention: _____

WASTE INFORMATION

Name of Waste/Common Chemical Name:

Waste Acids

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

Chemical Tank Manufacturing

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: D002 D005

PHYSICAL CHARACTERISTICS OF WASTE

Color: <input type="checkbox"/> White/Clear <input type="checkbox"/> Black/Brown <input checked="" type="checkbox"/> Other <u>Acids</u>	Suspended Solids <input checked="" type="checkbox"/> 0-1 % <input type="checkbox"/> 3-5 % <input type="checkbox"/> 1-3 % <input type="checkbox"/> > 5%	Layers: <input type="checkbox"/> Multi-Layered <input type="checkbox"/> Bi-Layered <input checked="" type="checkbox"/> Single Phase	Specific Gravity: <input type="checkbox"/> <0.8 <input type="checkbox"/> 1.0 - 1.2 <input type="checkbox"/> 0.8 - 1.0 <input type="checkbox"/> 1.3 - 1.4 Exact / Other <u>0.94-1.10</u>	acceptable 08.26.16
---	---	---	---	------------------------

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 - 0 PPM (MUST BE COMPLETED)

SEE ATTACHED (M)SDSs

TOTAL COMPOSITION OF WASTE - MUST BE EQUAL TO OR GREATER THAN 100% (LIST EACH CONSTITUENT ≥ 0.1%)

CONSTITUENT	MAX	MIN	CONSTITUENT	MAX	MIN
<u>Sulfonic Acids</u>	<u>75</u>	<u>0</u>			
<u>Potassium Oil</u>	<u>30</u>	<u>0</u>			
<u>Paraffin Waxes</u>	<u>30</u>	<u>0</u>			
<u>Barium Salts</u>	<u>30</u>	<u>0</u>			

Metals: Indicate if this waste contains any of the following metals. If Generator knowledge provide backup
 Lab Analysis Generator Knowledge TCLP TOTAL

	Not Present	Concentration	Not Present	Concentration						
PCB	<input type="checkbox"/>	ppm	Aromatic Amine	<input type="checkbox"/>	ppm	Arsenic (As)	D004	<input type="checkbox"/>	< 5 ppm	ppm
Dioxins	<input type="checkbox"/>	ppm	Pesticides	<input type="checkbox"/>	ppm	Barium (Ba)	D005	<input type="checkbox"/>	< 100 ppm	ppm
Cyanides Reactive	<input type="checkbox"/>	ppm	Rodenticides	<input type="checkbox"/>	ppm	Cadmium (Cd)	D006	<input type="checkbox"/>	< 1 ppm	ppm
Cyanides Total	<input type="checkbox"/>	ppm	Fungicides	<input type="checkbox"/>	ppm	Chromium (Cr)	D007	<input type="checkbox"/>	< 5 ppm	ppm
Sulfides Reactive	<input type="checkbox"/>	ppm				Lead (Pb)	D008	<input type="checkbox"/>	< 5 ppm	ppm
Sulfides Total	<input type="checkbox"/>	ppm				Mercury (Hg)	D009	<input type="checkbox"/>	< 0.2 ppm	ppm
						Selenium (Se)	D010	<input type="checkbox"/>	< 1 ppm	ppm
						Silver (Ag)	D011	<input type="checkbox"/>	< 5 ppm	ppm

TCLP Organics D012 - D043 above regulatory limits: Present Not Present

IS WASTE ANY OF THE FOLLOWING? *At Least One Box Must Be Checked.*
 Radioactive Water Reactive Oxidizer Shock Sensitive Reactive (other) DOT Explosives
 NIOSH Human-Positive Carcinogens NESHAP Wastes (Benzene, etc.) Biological None Apply

SHIPPING INFORMATION

1. Is this a DOT Hazardous Material (49CFR 172.101 & 173 Subpart D)? Yes No
2. Reportable Quantity (RQ) in pounds _____
3. DOT Shipping Name: Waste Corrosive Liquid, Acetic, Inorganic, n.o.s. (Sulfonic Acids)
 Hazard Class 8 UN 3264
- PG I ERG 157 Hazardous Constituents for "n.o.s." SULFONIC ACIDS
4. Method of Shipment: Bulk Tanker Tank truck Rail Car Drums Totes
6. Number of Units to Ship Now: _____ 6. Anticipated Volume / Units per Year: VARIES or One Time
6. Special Handling Requirements including PPE: _____

CERTIFICATION STATEMENT

I hereby represent and warrant that I have personally examined and am familiar with the information contained and submitted in this and all attached documents. Based on my inquiry and personal knowledge of those individuals responsible for supplying or obtaining the information, the information contained herein is true, accurate, and complete to the best of my knowledge and belief. Furthermore, no material fact has been omitted as to make this information misleading. I understand that others may rely on this representation and warranty in the handling and processing of the waste material described herein. If this box is checked , I request Environmental Geo-Technologies to correct any inconsistencies. Any corrections Environmental Geo-Technologies makes shall be made in accordance with the results of the sample characterization and analysis.

Printed Name: _____
Generator's Signature: _____

GENERATOR'S CHAIN OF CUSTODY RECORD INSTRUCTIONS: PLEASE collect a representative 1-quart sample of the waste described in the above referenced GENERATOR'S WASTE PROFILE REPORT using an appropriate container. A representative sample is one obtained using any of the applicable sampling methods cited in 40 CFR 261-Appendix 1. Fill in the sampling information in the spaces provided below. If you have problems obtaining a representative sample of your waste, please contact your Environmental Geo-Technologies representative.

1. SAMPLING METHOD _____ 2. COLLECTION POINT _____
3. SAMPLE COLLECTOR'S NAME, TITLE, EMPLOYER _____
4. Sample No. _____ Preservation: Yes No

5. CHAIN OF CUSTODY *Each person who handles the sample must sign below when the sample passes from one to another.*

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
_____	_____	_____	_____	_____	_____

	US RCRA Hazard Class	not determine
14.	Section 14:	Transport Information

D.O.T. Classification

14.1 UN number: None; not classified

14.2 UN proper shipping name: None; not classified

14.3 Transport hazard class(es): None; not classified

14.4 Packing group: None; not classified

14.5 Environmental hazards: not classified

14.6 Special precautions for user: not classified

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: not classified

15.	Section 15:	Regulatory Information
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15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1 OSHA

Toxic and hazardous substances (29 CFR 1910; Subpart Z)
None determined

15.1.2 SARA Title III section 311 and 312

This product is classified as an acute health hazard

15.1.2 SARA 302 and SARA 313 Components

Sec. 302 (EHS) TPQ	none determined
EHS RQ	none determined
CERCLA RQ	none determined

Sec 313

The following components are subject to the reporting levels established by SARA Title III, section 313:

Sulfonic acids, petroleum, barium salts 61790-48-5

15.1.3 International registries

none determined

15.1.4 State Right to Know Lists

None determined

15.1.5 TSCA (Toxic Substance Control Act)

All ingredients of this product are listed on the TSCA inventory.

15.1.6 Proposition 65 (California)

None determined



Lakeland Laboratories, Inc.

8290 Pettysville Road
Pinckney, MI 48169

Phone: (734) 878-3400
FAX: (734) 878-3981

Certificate of Analysis

Date: July 27, 2016

Sample ID: Calumet 142 Flash

Parameters	Result	LRL	Units	Method Reference	Analysis Date	Analyst
pH	5.4	1-14		SW846 9045C	7/19/2016	LLW

Parameter- The analysis performed or name of the chemical analyzed.

Result- The reported concentration in the sample at or above reg level

LRL- Lower Reporting Level

Units- The unit which corresponds to the reported concentration

Method Reference- The method used to provide results.

Analysis Date- Date the analysis was performed

Analyst- Initials of the analyst performing the analysis

ND- Parameter not detected above the reported LRL

Reviewed By: Lorri White

Date: 7/27/2016



Lakeland Laboratories, Inc.

8290 Pettysville Road
Pinckney, MI 48169

Phone: (734) 878-3400
FAX: (734) 878-3981

Certificate of Analysis

Date: July 27, 2016

Sample ID: Counter Rust 7165

Parameters	Result	LRL	Units	Method Reference	Analysis Date	Analyst
pH	6.4	1-14		SW846 9045C	7/19/2016	LLW

Parameter- The analysis performed or name of the chemical analyzed.

Result- The reported concentration in the sample at or above reg level

LRL- Lower Reporting Level

Units- The unit which corresponds to the reported concentration

Method Reference- The method used to provide results.

Analysis Date- Date the analysis was performed

Analyst- Initials of the analyst performing the analysis

ND- Parameter not detected above the reported LRL

Reviewed By: Lorri White

Date: 7/27/2016



Lakeland Laboratories, Inc.

8290 Pettysville Road
Pinckney, MI 48169

Phone: (734) 878-3400
FAX: (734) 878-3981

Certificate of Analysis

Date: July 27, 2016



Sample ID: Counter Rust 6065

Parameters	Result	LRL	Units	Method Reference	Analysis Date	Analyst
pH	5.3	1-14		SW846 9045C	7/19/2016	LLW

Parameter- The analysis performed or name of the chemical analyzed.
 Result- The reported concentration in the sample at or above reg level
 LRL- Lower Reporting Level
 Units- The unit which corresponds to the reported concentration
 Method Reference- The method used to provide results.
 Analysis Date- Date the analysis was performed
 Analyst- Initials of the analyst performing the analysis
 ND- Parameter not detected above the reported LRL

Reviewed By: Lorri White

Date: 7/27/2016



Lakeland Laboratories, Inc.

8290 Pettysville Road
Pinckney, MI 48169

Phone: (734) 878-3400
FAX: (734) 878-3981

Certificate of Analysis

Sample ID: Medium Neutral Slack Wax

Parameters	Result	LRL	Units	Method Reference	Analysis Date	Analyst
pH	6.8	1-14		SW846 9045C	7/19/2018	LLW

Parameter- The analysis performed or name of the chemical analyzed.

Result- The reported concentration in the sample at or above reg level

LRL- Lower Reporting Level

Units- The unit which corresponds to the reported concentration

Method Reference- The method used to provide results.

Analysis Date- Date the analysis was performed

Analyst- Initials of the analyst performing the analysis

ND- Parameter not detected above the reported LRL

Reviewed By: Lorri White

Date: 7/27/2018



Lakeland Laboratories, Inc.

8290 Pettysville Road
Pinckney, MI 48169

Phone: (734) 878-3400
FAX: (734) 878-3981

Certificate of Analysis

Sample ID: PE Oxdate

Parameters	Result	LRL	Units	Method Reference	Analysis Date	Analyst
pH	3.9	1-14		SW846 9045C	7/19/2016	LLW
Flashpoint	DNF	200	°F	SW846 1010	7/20/2016	EDW

Parameter- The analysis performed or name of the chemical analyzed.

Result- The reported concentration in the sample at or above reg level

LRL- Lower Reporting Level

Units- The unit which corresponds to the reported concentration

Method Reference- The method used to provide results.

Analysis Date- Date the analysis was performed

Analyst- Initials of the analyst performing the analysis

ND- Parameter not detected above the reported LRL

Reviewed By: Lorri White

Date: 7/27/2016



Lakeland Laboratories, Inc.

8290 Pettysville Road
Pinckney, MI 48169

Phone: (734) 878-3400
FAX: (734) 878-3981

Certificate of Analysis



Sample ID: Counter Rust 7010

Parameters	Result	LRL	Units	Method Reference	Analysis Date	Analyst
pH	6.8	1-14		SW848 9045C	7/19/2016	LLW
Barium	240	10	mg/L	SW846 7081	1/15/2002	LLW

Parameter- The analysis performed or name of the chemical analyzed.
 Result- The reported concentration in the sample at or above reg level
 LRL- Lower Reporting Level
 Units- The unit which corresponds to the reported concentration
 Method Reference- The method used to provide results.
 Analysis Date- Date the analysis was performed
 Analyst- initials of the analyst performing the analysis
 ND- Parameter not detected above the reported LRL

Reviewed By: Lorri White

Date: 7/27/2016

Lakeland Laboratories, Inc.

Phone: 734-878-3400

CHAIN-OF-CUSTODY RECORD

FAX: 734-878-3981

ITEM NO.	SAMPLE NUMBER	DATE	MATRIX	COMP	GRAB	SAMPLE DESCRIPTION	NUMBER OF CONTAINERS	ANALYSIS DESIRED				LAB #
								INDICATE SEPARATE CONTAINERS	2 WEEK TAT	1 WEEK TAT	48 HR. RUSH SPECIM.	
												104916
						Counter Rust CA-45			X			104917
						Calumet 142 Flash			X			104918
						Hyfron 1000 2400			X			104919
						Hyfron 1000 500 Oil #23			X			104920
						Hyfron 500 Lt. Lobe Needs Seal			X			104921
						Counter Rust 716S			X			104922
						Counter Rust 7008			X			104923
						Counter Rust 606S			X			104924
						Self Gel 170			X			104925
						Counter Rust 6020			X			
						Counter Rust 6022			X			

TRANS. NO.	ITEM NUMBER	DATE/TIME	TRANSFERS ACCURIED BY	REMARKS
3				
4				

SAMPLER'S SIGNATURE: _____

FINE COPY - CLIENT

CANARY COPY - LAB

WHITE COPY - ORIGINAL

Barium
HAZ



GHS – Safety Data Sheet

Revised Hazard Communication Standard - HCS 2012

1.	Section 1:	Identification of the Substance/Mixture and the Company
----	------------	---

1.1 Product Identifier

Product Trade Name: Counter Rust™ BA-70
Second Line Name Description: Overbased Barium Sulfonate
Synonyms: Rust Preventive
Product Use: Industrial Rust Preventive Additive
Generic Chemical Name: Overbased Barium Sulfonate in oil
CAS#: Mixture
EINECS#: Mixture

1.2 Recommended Use of Chemical and Restrictions on Use

Recommended Use(s): Industrial Use only. Rust Preventive
Uses Advised Against: None Known
Created Date: May 29, 2015
Preparation/Revision Date: June 6, 2015

1.3 Details of the Supplier (Company Identification)

Name:
Address:
City, State, Zip, Country:
Telephone:
Fax:
Email (competent person):

1.4 Emergency Telephone Number

Emergency Phone Number: Chemtrecs 1-800-424-9300

The emergency telephone number is to be used only in the event of a chemical emergency involving a spill, leak, fire, exposure, or accident.

- P264 Wash hands thoroughly after handling
- P270 Do not eat, drink, or smoke when using this product
- P280 Wear protective gloves/protective clothing/eye protection
- P281 Use personal protective equipment as required

Response/Prevention

- Skin** P302/P264 IF ON SKIN: Wash thoroughly after handling.
P332/P313 If skin irritation occurs: Get medical advice/ attention.
- Eyes** P305/P351/P338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses if present and easy to do. Continue rinsing.
P337/P313 If eye irritation persists: Get medical advice/attention.
- Inhalation** P304/P341: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P309/P313: If exposed or you feel unwell, get medical advice/attention.
- Ingestion** P301/P330/P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P301/P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- Clothing** P306/P363 IF ON CLOTHING Wash contaminated clothing before reuse
- Storage** P404/P233 Store in a well-ventilated place. Keep container tightly closed.
P411/P235 Store at temperatures not exceeding 200°C/392°F.
- Disposal** Dispose according to local regulations.

2.3 Other Hazards: None known.

2.4 Additional Information: None.

3.	Section 3:	Composition/ Information on Ingredients:
-----------	-------------------	---

3.1 Mixtures: (ingredient /CAS/EU List No/ % or range)

Ingredient	CAS#	EC List No.	%	GHS Classification
Sulfonic acids, Petroleum, barium salts	61790-48-5	263-140-3	25-75	Not Available
Petroleum Oil	8002-05-9	232-298-5	25-75	Not Available

3.2 Additional Information

4.	Section 4:	First Aid Measures
-----------	-------------------	---------------------------

6.1 Personal precautions, protective equipment and emergency procedures

Personal protective equipment must be worn. See Personal Protection Section for PPE recommendations. Ventilate areas if spilled in confined space or other poorly ventilated areas. Prevent entry into sewers or water courses. Collect free liquid for recycle or disposal. Residual liquid can be absorbed in inert material and collected in a container for disposal.

6.2 Environmental precautions

Avoid release into the environment.

6.3 Methods in material for containment and cleaning up

Small spillages: Cover spills with inert absorbent material. Transfer to a lidded container for disposal or recovery.

6.4 References to other sections

See Also Section: 8, 13.

7.	Section 7:	Handling and Storage
-----------	-------------------	-----------------------------

Flash Point COC: > 150°C

Flammable Limits: LEL – Not Known

UEL – Not Known

7.1 Precautions for safe handling

Use only outdoors or in a well-ventilated area.

Indoor use: Provide adequate ventilation, including appropriate local extraction.

Wear protective gloves/protective clothing/eye protection/face protection. See Section: 8.

Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed.

Storage temperature: Ambient

Storage Life: Stable under normal conditions

Incompatible materials: None Known

8.	Section 8:	Exposure controls/Personal protection.
-----------	-------------------	---

8.1 Control parameters

Minimize breathing vapor, mist, or fumes. Avoid prolonged contact with skin and eyes. Do not eat or smoke while using. Wash skin with soap and water after contact. Launder contaminated clothing.

Evaporation Rate	Slower than Bu Acetate	
Flammability (solid, gas)	Non-flammable (FP > 200°C)	
Upper/lower flammability or explosive limits	LEL – not known	UEL – not known
Vapor pressure	Not determined	
Vapor density	Not determined	
Relative density	Not determined	
Specific Gravity (g/mL)	1.10	
Solubility in:		
- Water	Insoluble	
- Alcohol	Not determined	
- mineral spirits/solvent	Soluble	
- oil	Soluble	
- other	NA	
Partition coefficient: n-octanol/water	Not Determined	
Auto-ignition temperature	>200°C	
Decomposition temperature	>200°C	
Viscosity	30-100 cSt @ 100°C	
Explosive properties	None expected	
Oxidizing properties	None expected	
Pounds per Gallon	9.2	

9.2 Other Information

None

10.	Section 10:	Stability and Reactivity
------------	--------------------	---------------------------------

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Stable under normal conditions.

10.4 Conditions to avoid

Keep away from heat (>200°F), hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5 Incompatible materials

Oxidizing agents. May react with strong alkali and acids.

10.6 Hazardous decomposition product(s)

Aldehydes. Oxides of calcium, carbon, and sulfur.

10.7 Hazardous Polymerization

Will not occur

the
Business



GHS – Safety Data Sheet

Revised Hazard Communication Standard - HCS 2012

1.	Section 1:	Identification of the Substance/Mixture and the Company
----	------------	---

1.1 Product Identifier

Product Trade Name: **Counter Rust™ 7010**

Second Line Name Description: **Water Displacing, Non-Staining, Non-Aqueous Rust Preventive**

Synonyms: **Rust Preventive, Coolant Additive**

Product Use: **Industrial Rust Preventive Additive**

Generic Chemical Name: **Petroleum Sulfonate Wax Oil Blend**

CAS#: **Mixture**

EINECS#: **Mixture**

1.2 Recommended Use of Chemical and Restrictions on Use

Recommended Use(s): **Industrial Use only. Rust Preventive**

Uses Advised Against: **None Known**

Created Date: **April 27, 2015**

Preparation/Revision Date: **June 6, 2015**

1.3 Details of the Supplier (Company Identification)

Name: [REDACTED]

Address: [REDACTED]

City, State, Zip, Country: [REDACTED]

Telephone: [REDACTED]

Fax: [REDACTED]

Email (competent person): [REDACTED]

1.4 Emergency Telephone Number

Emergency Phone Number: **Chemtrec 1-800-424-9300**

The emergency telephone number is to be used only in the event of a chemical emergency involving a spill, leak, fire, exposure, or accident.

2.	Section 2:	Hazards Identification:
-----------	-------------------	--------------------------------

2.1 Classification of the substance or mixture

GHS Product Classification

Flammability (1=3=flammable, 4=combustible, 5=non-flammable)

Acute Toxicity (1=most severe, 4=least)

Skin Irritation (1=most severe, 4=least)

Eye Irritation (1=most severe, 4=least)

(GHS Classification)

Category 5 – Non-flammable

Category 4 - Slight Hazard, Oral (ATE)

Category 3 - Mild Skin Irritation

Category 2B - Mild Eye Irritation

STOT = Specific Target Organ Toxicity

STOT SE/acute (1=most severe, 4=least)

STOT RE/chronic (1=most severe, 4=least)

(GHS Classification)

3 Slight Hazard – Eye/Skin Irritant

3 Slight Hazard – Eye/Skin Irritant

2.2 Label Elements

Product Name:

Counter Rust™ 7010

Hazard Pictograms

G07 Exclamation Point /other hazard

Eye/Skin Irritant; Vapors Irritation (at higher temperatures)



Signal Word: Warning

Hazard Statement(s):

- | | |
|-------------------|--|
| - General | Contains petroleum oil. |
| - Skin | H316: Causes mild skin irritation |
| - Eyes | H320: May cause eye irritation |
| - Inhalation | H333: May be harmful if inhaled |
| - Ingestion | H303: May be harmful if swallowed |
| - Target Organs | Skin/Eye Irritant |
| - Acute Effects | some irritation to skin, eyes, & breathing |
| - Chronic Effects | some irritation to skin, eyes, & breathing |

Precaution Statement(s):

- General:
- P202: Do not handle until all safety precautions have been read & understood.
 - P210 Keep away from heat/sparks/open flames/hot surfaces.
 - P233 Keep container tightly closed
 - P261 Avoid breathing dust/fume/gas/mist/vapors/spray/aerosol
 - P262 Do not get in eyes, on skin, or on clothing.

- P264 Wash hands thoroughly after handling
- P270 Do not eat, drink, or smoke when using this product
- P280 Wear protective gloves/protective clothing/eye protection
- P281 Use personal protective equipment as required

Response/Prevention

- Skin** P302/P264 IF ON SKIN: Wash thoroughly after handling.
P332/P313 If skin irritation occurs: Get medical advice/ attention.
- Eyes** P305/P351/P338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses if present and easy to do. Continue rinsing.
P337/P313 If eye irritation persists: Get medical advice/attention.
- Inhalation** P304/P341: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P309/P313: If exposed or you feel unwell, get medical advice/attention.
- Ingestion** P301/P330/P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P301/P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- Clothing** P306/P363 IF ON CLOTHING Wash contaminated clothing before reuse
- Storage** P404/P233 Store in a well-ventilated place. Keep container tightly closed.
P411/P235 Store at temperatures not exceeding 200°C/392°F.
- Disposal** Dispose according to local regulations.

2.3 Other Hazards: None known.

2.4 Additional Information: None.

3.	Section 3:	Composition/ Information on Ingredients:
-----------	-------------------	---

3.1 Mixtures: (Ingredient /CAS/EU List No/ % or range)

Ingredient	CAS#	EC List No	%	GHS Classification
Sulfonic acids, Petroleum, barium salts	61790-48-5	263-140-3	0-30	Not Available
Petroleum Oil	8002-05-9	232-298-5	0-30	Not Available
Hydrocarbon waxes, petroleum, oxidized	64743-00-6	265-205-1	0-20	Not Available

3.2 Additional Information

4.	Section 4:	First Aid Measures
----	------------	--------------------

4.1 Description of first aid measures

- Inhalation:** IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor/.../if you feel unwell.
- Skin contact:** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.
- Eye contact:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- Ingestion:** If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

4.2 Most important symptoms and effects, both acute and delayed

Seek immediate medical attention in event of any allergic reaction, excessive irritation, and/or difficulty breathing.

4.3 Indication of any immediate medical attention and special treatment needed

Seek immediate medical attention in event of any allergic reaction, excessive irritation, and/or difficulty breathing.

5.	Section 5:	Fire-Fighting Measures
----	------------	------------------------

Product is liquid, contains petroleum oil and may burn.

5.1 Extinguishing media

Suitable extinguishing media: In case of fire: Extinguish preferably with carbon dioxide, dry chemical, or foam.
Water may be used to cool and protect exposed metals.

Un- Suitable extinguishing media: None known.

5.2 Special hazards arising from the substance or mixture.

Mixture may contain oil(s) which burn with air particularly in enclosed spaces. Mainly oxides of carbon and water with small amounts of unidentified organic compounds. Water may cause splattering. Material will float on water.

5.3 Advice for fire-fighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Chemical protection suit. Keep containers cool by spraying with water if exposed to fire.

6.	Section 6:	Accidental Release Measures
----	------------	-----------------------------

6.1 Personal precautions, protective equipment and emergency procedures

Personal protective equipment must be worn. See Personal Protection Section for PPE recommendations. Ventilate areas if spilled in confined space or other poorly ventilated areas. Prevent entry into sewers or water courses. Collect free liquid for recycle or disposal. Residual liquid can be absorbed in inert material and collected in a container for disposal.

6.2 Environmental precautions

Avoid release into the environment.

6.3 Methods in material for containment and cleaning up

Small spillages: Cover spills with inert absorbent material. Transfer to a lidded container for disposal or recovery.

6.4 References to other sections

See Also Section: 8, 13.

7.	Section 7:	Handling and Storage
----	------------	----------------------

Flash Point: 60°C / 150°C

Flammable Limits: LEL – Not Known

UEL – Not Known

7.1 Precautions for safe handling

Use only outdoors or in a well-ventilated area.
Indoor use: Provide adequate ventilation, including appropriate local extraction.
Wear protective gloves/protective clothing/eye protection/face protection. See Section: 8.
Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed.

Storage temperature: Ambient
Storage Life: Stable under normal conditions
Incompatible materials: None Known

8.	Section 8:	Exposure controls/Personal protection
----	------------	---------------------------------------

8.1 Control parameters

Minimize breathing vapor, mist, or fumes. Avoid prolonged contact with skin and eyes. Do not eat or smoke while using. Wash skin with soap and water after contact. Launder contaminated clothing.

8.1.1 Occupational exposure limits

Substance	CAS No	LTEL (8hr TWA ppm)	LTEL (8hr TWA mg/ m ³)	STEL (ppm)	STEL (ppm)	Note: TLV
Sulfonic acids, Petroleum, barium salts	61790-48-5					
Petroleum Oil	8002-05-9		5.0			Mist
Hydrocarbon waxes, petroleum, oxidized	64743-00-6					

8.2 Appropriate engineering controls

Provide adequate ventilation, including appropriate local extraction. A washing facility/water for eye and skin cleaning purposes should be present.

8.3 Personal protection equipment



Eye/face protection

Wear protective eye glasses for protection against liquid splashes. Wear eye protection with side protection (EN166 or ANSI Z78.1 may be appropriate).



Skin protection

Wear protective gloves. Plastic or synthetic rubber (nitrile) gloves.



Respiratory protection

Not normally required but if desired, wear suitable respiratory protective equipment. A suitable mask with filter type A (EN14387 or EN405) may be appropriate.

9.	Section 9:	Physical and chemical properties
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9.1 Information on basic physical and chemical properties

Solid, Liquid, Gas, other	Waxy solid	
Appearance	Brown waxy solid	
Color	Brown	
Odor	Mild petroleum	
Odor threshold	Not determined	
pH concentrate	Not applicable	
pH dilution	Not applicable	
Melting point/freezing point	28-45°C	Typical 38°C
Initial boiling point	> 200°C	

boiling point range	> 200°C	
Flashpoint	> 150°C	
Evaporation Rate	Slower than Bu Acetate	
Flammability (solid, gas)	Non-flammable (FP>200°F)	
Upper/lower flammability or explosive limits	LEL – not known	UEL – not known
Vapor pressure	Not determined	
Vapor density	Not determined	
Relative density	Not determined	
Specific Gravity (g/mL)	0.94	
Solubility in:		
- Water	Insoluble	
- Alcohol	Not determined	
- mineral spirits/solvent	Soluble	
- oil	Soluble	
- other	NA	
Partition coefficient: n-octanol/water	Not Determined	
Auto-Ignition temperature	>200°C	
Decomposition temperature	>200°C	
Viscosity	NA - Waxy solid	
Explosive properties	None expected	
Oxidizing properties	None expected	
Pounds per Gallon	7.85	

9.2 Other Information

None

10.	Section 10:	Stability and Reactivity
-----	-------------	--------------------------

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Stable under normal conditions.

10.4 Conditions to avoid

Keep away from heat (>200°F), hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5 Incompatible materials

Oxidizing agents. May react with strong alkali and acids.

10.6 Hazardous decomposition product(s)

Oxides of barium, carbon, nitrogen and sulfur.

10.7 Hazardous Polymerization

Will not occur

11.	Section 11:	Toxicological Information
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11.1 Information on toxicological effects

Mixture:

Acute toxicity:

Acute toxicity rating: Category 4 - Slight Hazard, Oral (ATE)

Inhalation:

Inhalation toxicity rating: Category 4 Slight Hazard – mists may irritate mucous membranes and upper respiratory tract

Irritation:

Skin Irritation rating: Category 3 - Mild Skin Irritation

Eye Irritation rating: Category 2B - Mild Eye Irritation

Corrosivity:

Not classified.

Sensitization:

Not expected to be a skin sensitizer.

STOT - single exposure:

4 Slight Hazard – Eye/Skin Irritant

Repeated Dose toxicity:

4 Slight Hazard – Eye/Skin Irritant

Carcinogenicity:

Not classified.

Mutagenicity:

Not classified.

Toxicity for reproduction:

None anticipated.

11.2 Other information

None

12.	Section 12:	Ecological Information
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12.1 Toxicity:

Toxicity to aquatic organisms – not determined.

12.2 Persistence and degradability:

Product biodegradable in water and persistence – not determined.

12.3 Bioaccumulative potential:

Product potential for bioaccumulation – not determined

12.4 Mobility in soil:

Product mobility into the soil has not been determined. Oil soluble

12.5 Other adverse effects: none known

12.6 Other - Preliminary WGK (Self classification): 1-2

13.	Section 13:	Disposal Considerations
------------	--------------------	--------------------------------

13.1 Waste treatment methods

Material, if discarded is not expected to be a characteristic waste. Disposal should be in accordance with local regulations.

13.2 Additional information

US RCRA Hazard Class not determined

14.	Section 14:	Transport Information
-----	-------------	-----------------------

D.O.T. Classification

14.1 UN number: None; not classified

14.2 UN proper shipping name: None; not classified

14.3 Transport hazard class(es): None; not classified

14.4 Packing group: None; not classified

14.5 Environmental hazards: not classified

14.6 Special precautions for user: not classified

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: not classified

15.	Section 15:	Regulatory Information
-----	-------------	------------------------

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1 OSHA

Toxic and hazardous substances (29 CFR 1910; Subpart Z)

None determined

15.1.2a SARA Title III section 311 and 312

This product is classified as an acute health hazard

15.1.2b SARA 302 and SARA 313 Components

Sec. 302 (EHS) TPQ	none determined
EHS RQ	none determined
CERCLA RQ	none determined

Sec 313 The following components are subject to the reporting levels established by SARA Title III, section 313:

Sulfonic acids, petroleum, barium salts 61790-48-5

15.1.3 International registries

none determined

15.1.4 State Right to Know Lists

None determined

15.1.5 TSCA (Toxic Substance Control Act)

All ingredients of this product are listed on the TSCA inventory.

15.1.6 Proposition 65 (California)

None determined

15.1.7 CAA 602 - Ozone Depleting Substances (ODS)

None determined

16.	Section 16:	Other Information
-----	-------------	-------------------

NFPA		HMIS	
Health	1	Health	NA
Fire	1	Flammability	NA
Reactivity	0	Physical Hazards	NA

NFPA Code: 0=least, 1=slight, 2=moderate, 3=high, 4=extreme

Legend

LTEL = Long Term Exposure Limit

STEL = Short Term Exposure Limit

STOT = Specific Target Organ Toxicity

Disclaimers:

The data and advice given apply when the product is sold for the stated applications only. Use of the product for other applications not stated may give rise to risks not mentioned in this document. It is not recommended for other applications without seeking advice. If the product is for supply from a third party for use at work, it is your duty to take all necessary steps to ensure any person handling or using it is provided with the information in this document.

If you are an employer it is your duty to familiarize your employees and others who may come into contact with the product with the hazards described and any precautions which may be necessary in use.

Prepared according to the OSHA Revised Hazard Communication Standard 2012 (29 CFR 1910.1200) by Lockhart Chemical and Additives International.

The information set forth herein is furnished free of charge and is based on technical data that we believe to be reliable. It is intended for use by persons having technical skill and at their own discretion and risk. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of the information. Nothing herein is to be taken as a license to operate under or a recommendation to infringe any patents.

Counter Rust is a Trademark of Additives International & Lockhart Chemical

Barium
HAZ



GHS – Safety Data Sheet

Revised Hazard Communication Standard - HCS 2012

1.	Section 1:	Identification of the Substance/Mixture and the Company.
----	------------	--

1.1 Product Identifier

Product Trade Name: **Counter Rust™ 855**
Second Line Name Description: Water Displacing ~~Petroleum Sulfonate~~-based Rust Preventive
Synonyms: Rust Preventive, Coolant Additive
Product Use: Industrial Rust Preventive Additive
Generic Chemical Name: Petroleum Sulfonate Wax Oil Blend
CAS#: Mixture
EINECS#: Mixture

1.2 Recommended Use of Chemical and Restrictions on Use

Recommended Use(s): Industrial Use only. Rust Preventive
Uses Advised Against: None Known
Created Date: April 27, 2015
Preparation/Revision Date: June 6, 2015

1.3 Details of the Supplier

Name: [Redacted]
Address: [Redacted]
City, State, Zip, Country: [Redacted]
Telephone: [Redacted]
Fax: [Redacted]
Email (competent person): [Redacted]

1.4 Emergency Telephone Number

Emergency Phone Number: Chemtrecs 1-800-424-9300

The emergency telephone number is to be used only in the event of a chemical emergency involving a spill, leak, fire, exposure, or accident.

P264 Wash hands thoroughly after handling
 P270 Do not eat, drink, or smoke when using this product
 P280 Wear protective gloves/protective clothing/eye protection
 P281 Use personal protective equipment as required

Response/Prevention

Skin P302/P264 IF ON SKIN: Wash thoroughly after handling.
 P332/P313 If skin irritation occurs: Get medical advice/ attention.

Eyes P305/P351/P338 IF IN EYES: Rinse cautiously with water for several minutes.
 Remove contact lenses if present and easy to do. Continue rinsing.
 P337/P313 If eye irritation persists: Get medical advice/attention.

Inhalation P304/P341: IF INHALED: If breathing is difficult, remove victim to fresh air and keep
 at rest in a position comfortable for breathing.
 P309/P313: If exposed or you feel unwell, get medical advice/attention.

Ingestion P301/P330/P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P301/P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Clothing P306/P363 IF ON CLOTHING Wash contaminated clothing before reuse

Storage P404/P233 Store in a well-ventilated place. Keep container tightly closed.
 P411/P235 Store at temperatures not exceeding 200°C/392°F.

Disposal Dispose according to local regulations.

2.3 Other Hazards: None known.

2.4 Additional Information: None.

3.	Section 3:	Composition/ Information on Ingredients:
-----------	-------------------	---

3.1 Mixtures: (Ingredient /CAS/EU List No/ % or range)

Ingredient	CAS#	EC List No.	%	GHS Classification
Sulfonic acids, Petroleum, barium salts	61790-48-5	263-140-3	0-30	Not Available
Petroleum Oil	8002-05-9	232-298-5	0-30	Not Available
Paraffin waxes	64742-51-4	265-154-5	0-30	Not Available

3.2 Additional Information

6.	Section 6:	Accidental Release Measures
----	------------	-----------------------------

6.1 Personal precautions, protective equipment and emergency procedures

Personal protective equipment must be worn. See Personal Protection Section for PPE recommendations. Ventilate areas if spilled in confined space or other poorly ventilated areas. Prevent entry into sewers or water courses. Collect free liquid for recycle or disposal. Residual liquid can be absorbed in inert material and collected in a container for disposal.

6.2 Environmental precautions

Avoid release into the environment.

6.3 Methods in material for containment and cleaning up

Small spillages: Cover spills with inert absorbent material. Transfer to a lidded container for disposal or recovery.

6.4 References to other sections

See Also Section: 8, 13.

7.	Section 7:	Handling and Storage
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Flash Point COC: > 150°C

Flammable Limits: LEL – Not Known

UEL – Not Known

7.1 Precautions for safe handling

Use only outdoors or in a well-ventilated area.

Indoor use: Provide adequate ventilation, including appropriate local extraction.

Wear protective gloves/protective clothing/eye protection/face protection. See Section: 8.

Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed.

Storage temperature: Ambient

Storage Life: Stable under normal conditions

Incompatible materials: None Known

8.	Section 8:	Exposure controls/Personal protection
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8.1 Control parameters

Minimize breathing vapor, mist, or fumes. Avoid prolonged contact with skin and eyes. Do not eat or smoke while using. Wash skin with soap and water after contact. Launder contaminated clothing.

Flashpoint	>150°C	
Evaporation Rate	Slower than Bu Acetate	
Flammability (solid, gas)	Non-flammable (FP>200°F)	
Upper/lower flammability or explosive limits	LEL – not known	UEL – not known
Vapor pressure	Not determined	
Vapor density	Not determined	
Relative density	Not determined	
Specific Gravity (g/ml)	1.093	
Solubility in:		
- Water	Insoluble	
- Alcohol	Not determined	
- mineral spirits/solvent	Soluble	
- oil	Soluble	
- other	NA	
Partition coefficient: n-octanol/water	Not Determined	
Auto-ignition temperature	>200°C	
Decomposition temperature	>200°C	
Viscosity	NA - Waxy solid	
Explosive properties	None expected	
Oxidizing properties	None expected	
Pounds per Gallon	7.76	

9.2 Other information

None

10.	Section 10:	Stability and Reactivity
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10.1 Reactivity

Stable under normal conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Stable under normal conditions.

10.4 Conditions to avoid

Keep away from heat (>200°F), hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5 Incompatible materials

Oxidizing agents. May react with strong alkali and acids.

10.6 Hazardous decomposition product(s)

Oxides of barium, carbon, nitrogen and sulfur.

10.7 Hazardous Polymerization

Will not occur

US RCRA Hazard Class not determined

14.	Section 14:	Transport Information
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D.O.T. Classification

14.1 UN number: None; not classified

14.2 UN proper shipping name: None; not classified

14.3 Transport hazard class(es): None; not classified

14.4 Packing group: None; not classified

14.5 Environmental hazards: not classified

14.6 Special precautions for user: not classified

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: not classified

15.	Section 15:	Regulatory Information
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15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1 OSHA

Toxic and hazardous substances (29 CFR 1910; Subpart Z)
None determined

15.1.2a SARA Title III section 311 and 312

This product is classified as an acute health hazard

15.1.2b SARA 302 and SARA 313 Components

Sec. 302 (EHS) TPQ	none determined
EHS RQ	none determined
CERCLA RQ	none determined

Sec 313	The following components are subject to the reporting levels established by SARA Title III, section 313: <i>Sulfonic acids, petroleum, barium salts</i>	61790-48-5
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15.1.3 International registries

none determined

15.1.4 State Right to Know Lists

None determined

15.1.5 TSCA (Toxic Substance Control Act)

All ingredients of this product are listed on the TSCA Inventory.

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC
 28470 Citrin Dr, Romulus, MI 48174. Telephone 734 946 1000. Fax 734 946 1002

Generator Waste Profile
Profile # 01017

GENERATOR INFORMATION

Name: [REDACTED]
 Facility Address: [REDACTED]
 City: [REDACTED]
 Contact: [REDACTED]

BILLING INFORMATION

SAME AS ABOVE

Company Name: [REDACTED]
 Address: [REDACTED]
 City: [REDACTED]
 Attention: [REDACTED]

WASTE INFORMATION

Name of Waste/Common Chemical Name:

Waste Caustic

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

Chemical Tank Manufacturing

USEPA / STATE WASTE IDENTIFICATION

- This waste is considered to be: Non Hazardous Liquid Industrial Waste Hazardous Waste
- Regulated by TSCA? Yes No (PCBs, etc.)
- List ALL Applicable Waste Codes: 029L

PHYSICAL CHARACTERISTICS OF WASTE

Color: <input type="checkbox"/> White/Clear <input type="checkbox"/> Black/Brown <input checked="" type="checkbox"/> Other <u>varies</u>	Suspended Solids <input checked="" type="checkbox"/> 0-1% <input type="checkbox"/> 3-5% <input type="checkbox"/> 1-3% <input type="checkbox"/> > 5%	Layers: <input type="checkbox"/> Multi-Layered <input type="checkbox"/> Bi-Layered <input checked="" type="checkbox"/> Single Phase	Specific Gravity: <input type="checkbox"/> <0.8 <input type="checkbox"/> 1.0-1.2 <input type="checkbox"/> 0.8-1.0 <input type="checkbox"/> 1.3-1.4 Exact / Other <u>1.4-1.525</u>	<i>acceptable</i> <u>08.24.16</u>
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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 - 0 PPM (MUST BE COMPLETED)

TOTAL COMPOSITION OF WASTE - MUST BE EQUAL TO OR GREATER THAN 100% (LIST EACH CONSTITUENT $\geq 0.1\%$) *See Attached MSDS*

CONSTITUENT	MAX	MIN	CONSTITUENT	MAX	MIN
<u>Sodium Hydroxide</u>	<u>99</u>	<u>50</u>			
<u>Water</u>	<u>50</u>	<u>1</u>			

Metals: Indicate if this waste contains any of the following metals. If Generator knowledge provide backup
 Lab Analysis Generator Knowledge TCLP TOTAL

Not Present		Concentration	Not Present		Concentration				
PCB	<input checked="" type="checkbox"/>	ppm	Aromatic Amine	<input type="checkbox"/>	ppm	Arsenic (As)	D004	<input checked="" type="checkbox"/>	< 5 ppm
Dioxins	<input type="checkbox"/>	ppm	Pesticides	<input type="checkbox"/>	ppm	Barium (Ba)	D006	<input type="checkbox"/>	< 100 ppm
Cyanides Reactive	<input type="checkbox"/>	ppm	Rodenticides	<input type="checkbox"/>	ppm	Cadmium (Cd)	D008	<input type="checkbox"/>	< 1 ppm
Cyanides Total	<input type="checkbox"/>	ppm	Fungicides	<input type="checkbox"/>	ppm	Chromium (Cr)	D007	<input type="checkbox"/>	< 5 ppm
Sulfides Reactive	<input type="checkbox"/>	ppm				Lead (Pb)	D008	<input type="checkbox"/>	< 5 ppm
Sulfides Total	<input type="checkbox"/>	ppm				Mercury (Hg)	D009	<input type="checkbox"/>	< 0.2 ppm
						Selenium (Se)	D010	<input type="checkbox"/>	< 1 ppm
						Silver (Ag)	D011	<input type="checkbox"/>	< 5 ppm

TCLP Organics D012 - D043 above regulatory limits: Present Not Present

IS WASTE ANY OF THE FOLLOWING?

At Least One Box Must Be Checked.

- Radioactive
- Water Reactive
- Oxidizer
- Shock Sensitive
- Reactive (other)
- DOT Explosives
- NIOSH Human-Positive Carcinogens
- NESHAP Wastes (Benzene, etc.)
- Biological
- None Apply

SHIPPING INFORMATION

- Is this a DOT Hazardous Material (49CFR 172.101 & 173 Subpart D)? Yes No
- Reportable Quantity (RQ) in pounds _____
- DOT Shipping Name: Waste Corrosive Liquid, basic, inorganic, n.o.s. (sodium hydroxide) 8, I, UN3266 Hazard Class 8 UN 3266
- Method of Shipment: Bulk Tanker Vac truck Rail Car Drums Totes
- Number of Units to Ship Now: _____ 6. Anticipated Volume / Units per Year: VALUES or One Time
- Special Handling Requirements including PPE: _____

CERTIFICATION STATEMENT

I hereby represent and warrant that I have personally examined and am familiar with the information contained and submitted in this and all attached documents. Based on my inquiry and personal knowledge of those individuals responsible for supplying or obtaining the information, the information contained herein is true, accurate, and complete to the best of my knowledge and belief. Furthermore, no material fact has been omitted as to make this information misleading. I understand that others may rely on this representation and warranty in the handling and processing of the waste material described herein. If this box is checked , I request Environmental Geo-Technologies not to correct any inconsistencies. Any corrections Environmental Geo-Technologies makes will be consistent with the results of the sample characterization.

Printed Name: _____

Generator's Signature: _____

GENERATOR'S CHAIN OF CUSTODY RECORD INSTRUCTIONS:

PLEASE collect a representative 1-quart sample of the waste described in the above referenced GENERATOR'S WASTE PROFILE REPORT using an appropriate container. A representative sample is one obtained using any of the applicable sampling methods cited in 40 CFR 261-Appendix 1. Fill in the sampling information in the spaces provided below. If you have problems obtaining a representative sample of your waste, please contact your Environmental Geo-Technologies representative.

- SAMPLING METHOD _____ 2. COLLECTION POINT _____
- SAMPLE COLLECTOR'S NAME, TITLE, EMPLOYER _____
- Sample No. _____ Preservation: Yes No

5. CHAIN OF CUSTODY Each person who handles the sample must sign below when the sample passes from one to another.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
_____	_____	_____	_____	_____	_____



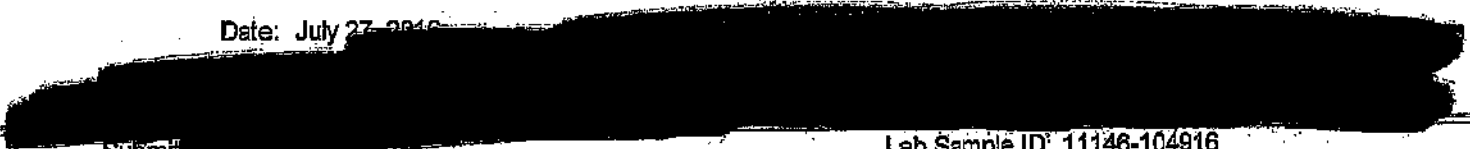
Lakeland Laboratories, Inc.

8290 Pettysville Road
Pinckney, MI 48169

Phone: (734) 878-3400
FAX: (734) 878-3981

Certificate of Analysis

Date: July 27, 2016



Submitter: [Redacted]
Collection Date: 7/19/2016

Lab Sample ID: 11146-104916

Sample ID: Counter Rust, CA-45

Parameters	Result	LRL	Units	Method Reference	Analysis Date	Analyst
pH	8.2	1-14		SW846 9045C	7/19/2016	LLW

Parameter- The analysis performed or name of the chemical analyzed.
 Result- The reported concentration in the sample at or above reg level
 LRL- Lower Reporting Level
 Units- The unit which corresponds to the reported concentration
 Method Reference- The method used to provide results.
 Analysis Date- Date the analysis was performed
 Analyst- Initials of the analyst performing the analysis
 ND- Parameter not detected above the reported LRL

Reviewed By: Corri White

Date: 7/27/2016



Lakeland Laboratories, Inc.

8290 Pettysville Road
Pinckney, MI 48169

Phone: (734) 878-3400
FAX: (734) 878-3981

Certificate of Analysis

Date: July 27, 2016

Submit Date: 7/19/2016
Collection Date: 7/19/2016

Lab Sample ID: 11146-104918

Sample ID: 100 Oil - 400

Parameters	Result	LRL	Units	Method Reference	Analysis Date	Analyst
pH	12.0	1-14		SW846 9045C	7/19/2016	LLW

Parameter- The analysis performed or name of the chemical analyzed.

Result- The reported concentration in the sample at or above reg level

LRL- Lower Reporting Level

Units- The unit which corresponds to the reported concentration

Method Reference- The method used to provide results.

Analysis Date- Date the analysis was performed

Analyst- Initials of the analyst performing the analysis

ND- Parameter not detected above the reported LRL

Reviewed By: Lorri White

Date: 7/27/2016



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Phone: (734) 878-3400
FAX: (734) 878-3981

Certificate of Analysis

Date: July 27, 2016

Submit Date: 7/19/2016
Collection Date: 7/19/2016

Lab Sample ID: 11146-104919

Sample ID: 500 Oil - 423

Parameters	Result	LRL	Units	Method Reference	Analysis Date	Analyst
pH	8.6	1-14		SW846 9045C	7/19/2016	LLW

Parameter- The analysis performed or name of the chemical analyzed.

Result- The reported concentration in the sample at or above reg level

LRL- Lower Reporting Level

Units- The unit which corresponds to the reported concentration

Method Reference- The method used to provide results.

Analysis Date- Date the analysis was performed

Analyst- Initials of the analyst performing the analysis

ND- Parameter not detected above the reported LRL

Reviewed By: Lorri White

Date: 7/27/2016



Lakeland Laboratories, Inc.

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Phone: (734) 878-3400
FAX: (734) 878-3981

Certificate of Analysis

Date: July 27, 2016

Submit Date: 7/19/2016
Collection Date: 7/19/2016

Lab Sample ID: 11146-104921

Sample ID: Counter Rust 7008

Parameters	Result	LRL	Units	Method Reference	Analysis Date	Analyst
pH	12.0	1-14		SW846 9045C	7/19/2016	LLW

Parameter- The analysis performed or name of the chemical analyzed.
 Result- The reported concentration in the sample at or above reg level
 LRL- Lower Reporting Level
 Units- The unit which corresponds to the reported concentration
 Method Reference- The method used to provide results.
 Analysis Date- Date the analysis was performed
 Analyst- Initials of the analyst performing the analysis
 ND- Parameter not detected above the reported LRL

Reviewed By: Lorri White
 Date: 7/27/2016



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Certificate of Analysis

Date: July 27, 2016

Submit Date: 7/19/2016
Collection Date: 7/19/2016

Lab Sample ID: 11146-104923

Sample ID: Selfo Gel 170

Parameters	Result	LRL	Units	Method Reference	Analysis Date	Analyst
pH	8.2	1-14		SW846 8045C	7/19/2016	LLW

Parameter- The analysis performed or name of the chemical analyzed.
 Result- The reported concentration in the sample at or above reg level
 LRL- Lower Reporting Level
 Units- The unit which corresponds to the reported concentration
 Method Reference- The method used to provide results.
 Analysis Date- Date the analysis was performed
 Analyst- Initials of the analyst performing the analysis
 ND- Parameter not detected above the reported LRL

Reviewed By: Lorri White

Date: 7/27/2016



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Certificate of Analysis

Date: July 27, 2016



Submit Date: 7/19/2016
Collection Date: 7/19/2016

Lab Sample ID: 11146-104924

Sample ID: Counter Rust 6020

Parameters	Result	LRL	Units	Method Reference	Analysis Date	Analyst
pH	7.6	1-14		SW846 9045C	7/19/2016	LLW

Parameter- The analysis performed or name of the chemical analyzed.
 Result- The reported concentration in the sample at or above reg level
 LRL- Lower Reporting Level
 Units- The unit which corresponds to the reported concentration
 Method Reference- The method used to provide results.
 Analysis Date- Date the analysis was performed
 Analyst- Initials of the analyst performing the analysis
 ND- Parameter not detected above the reported LRL.

Reviewed By: Lorri White
 Date: 7/27/2016



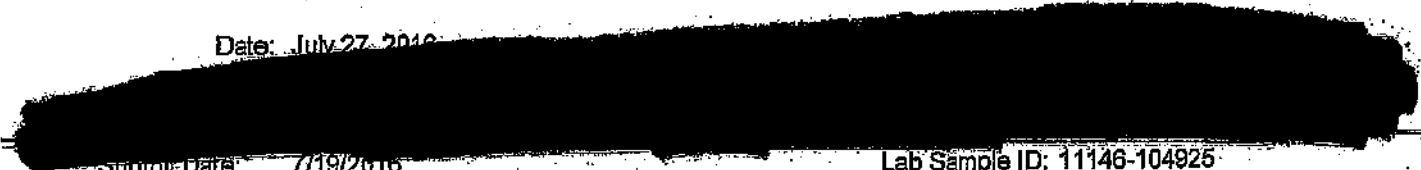
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FAX: (734) 878-3981

Certificate of Analysis

Date: July 27, 2016



Submit Date: 7/19/2016
Collection Date: 7/19/2016

Lab Sample ID: 11146-104925

Sample ID: Counter Rust 6022

Parameters	Result	LRL	Units	Method Reference	Analysis Date	Analyst
pH	8.4	1-14		SW846 9045C	7/19/2016	LLW

Parameter- The analysis performed or name of the chemical analyzed.
 Result- The reported concentration in the sample at or above reg level
 LRL- Lower Reporting Level
 Units- The unit which corresponds to the reported concentration
 Method Reference- The method used to provide results.
 Analysis Date- Date the analysis was performed
 Analyst- Initials of the analyst performing the analysis
 ND- Parameter not detected above the reported LRL

Reviewed By: Lorri White
 Date: 7/27/2016



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Certificate of Analysis

Date: July 27, 2016

Submit Date: 7/19/2016
Collection Date: 7/19/2016

Lab Sample ID: 11146-104927

Sample ID: Lockguard 7435

Parameters	Result	LRL	Units	Method Reference	Analysis Date	Analyst
Flashpoint	DNF	200	°F	SW846 1010	7/20/2016	EDW

Parameter- The analysis performed or name of the chemical analyzed.

Result- The reported concentration in the sample at or above reg level

LRL- Lower Reporting Level

Units- The unit which corresponds to the reported concentration

Method Reference- The method used to provide results.

Analysis Date- Date the analysis was performed

Analyst- Initials of the analyst performing the analysis

ND- Parameter not detected above the reported LRL

Reviewed By: Lorri White

Date: 7/27/2016



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Certificate of Analysis

Date: July 27, 2016

Submit Date: 7/19/2016
Collection Date: 7/19/2016

Lab Sample ID: 11146-104928

Sample ID: Lockguard 7420

Parameters	Result	LRL	Units	Method Reference	Analysis Date	Analyst
pH	7.5	1-14		SW846 9045C	7/19/2016	LLW
Flashpoint	DNF	200	°F	SW846 1010	7/20/2016	EDW

Parameter- The analysis performed or name of the chemical analyzed.

Result- The reported concentration in the sample at or above reg level

LRL- Lower Reporting Level

Units- The unit which corresponds to the reported concentration

Method Reference- The method used to provide results.

Analysis Date- Date the analysis was performed

Analyst- Initials of the analyst performing the analysis

ND- Parameter not detected above the reported LRL

Reviewed By: Lorri White

Date: 7/27/2016



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FAX: (734) 878-3981

Certificate of Analysis



Submit Date: 7/19/2016
Collection Date: 7/19/2016

Lab Sample ID: 11146-104931

Sample ID: Counter Rust BA - 70

Parameters	Result	LRL	Units	Method Reference	Analysis Date	Analyst
pH	7.2	1-14		SW846 9045C	7/19/2016	LLW
Barium	240	10	mg/L	SW846 7081	1/15/2002	LLW

Parameter- The analysis performed or name of the chemical analyzed.
 Result- The reported concentration in the sample at or above reg level
 LRL- Lower Reporting Level
 Units- The unit which corresponds to the reported concentration
 Method Reference- The method used to provide results.
 Analysis Date- Date the analysis was performed
 Analyst- Initials of the analyst performing the analysis
 ND- Parameter not detected above the reported LRL

Reviewed By: Lorri White
 Date: 7/27/2016



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8290 Pettysville Road
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Phone: (734) 878-3400
FAX: (734) 878-3981

Certificate of Analysis

Date: July 27, 2016

Lab Sample ID: 11148-104932

Sample ID: Counter Rust 855

Parameters	Result	LRL	Units	Method Reference	Analysis Date	Analyst
pH	7.4	1-14		SW846 9045C	7/19/2016	LLW
Barium	270	10	mg/L	SW848 7081	1/15/2002	LLW

Parameter- The analysis performed or name of the chemical analyzed.

Result- The reported concentration in the sample at or above reg level

LRL- Lower Reporting Level

Units- The unit which corresponds to the reported concentration

Method Reference- The method used to provide results.

Analysis Date- Date the analysis was performed

Analyst- initials of the analyst performing the analysis

ND- Parameter not detected above the reported LRL

Reviewed By: Lorri White

Date: 7/27/2016

A-70

DOOR

1. Identification

Product identifier Sodium Hydroxide Solution 30 - 54%

Other means of Identification

SDS number 10000009

Synonyms Caustic Soda, Caustic Alkali, Lye, Caustic lye, Caustic Soda Liquid 50%, Soda Lye, Liquid Caustic, Sodium Hydroxide

Recommended use Pulping and Bleaching, pH neutralizer, Detergent, Soaps.

Recommended restrictions None known.

Manufacturer / Importer / Supplier / Distributor information

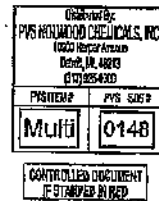
Company name Olin Chlor Alkali Products
Address 490 Stuart Road, NE
Cleveland, TN 37312

Company name Pioneer Americas, LLC (d/b/a Olin Chlor Alkali Products)
Address 490 Stuart Road, NE
Cleveland, TN 37312

Company name Olin Canada ULC (d/b/a Olin Chlor Alkali Products)
Address 2020 University, Suite 2100
Montreal, Quebec H3A 2A5

General Information

Telephone (888) 658-6SDS (737)
Website olinchloralkali.com
Contact person ORC SDS Control Group
Emergency phone number CHEMTREC
US: 1-800-424-9300 Canada: 1-800-567-7455



2. Hazard(s) Identification

Physical hazards Corrosive to metals Category 1

Health hazards Acute toxicity, oral Category 4
Skin corrosion/irritation Category 1
Serious eye damage/eye irritation Category 1

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement May be corrosive to metals. Harmful if swallowed. Causes severe skin burns and eye damage.

Precautionary statement

Prevention Keep only in original container. Wear protective gloves/protective clothing/eye protection/face protection. Do not eat, drink or smoke when using this product. Do not breathe mist or vapor. Wash thoroughly after handling.

Response If swallowed: Rinse mouth. Do NOT induce vomiting. If inhaled: Remove person to fresh air and keep comfortable for breathing. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

Storage Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) Not classified.

Environmental hazards Hazardous to the aquatic environment, acute hazard Category 3

Supplemental Information

Hazard statement

Harmful to aquatic life.

Precautionary statement

Avoid release to the environment.

Prevention

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Sodium hydroxide	1310-73-2	30 - 54

4. First-aid measures

Inhalation

Move to fresh air. If breathing is difficult, give oxygen. If breathing stops, provide artificial respiration. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.

Skin contact

Take off immediately all contaminated clothing. Wash off IMMEDIATELY with plenty of water for at least 15-20 minutes. Get medical attention immediately! Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion

Call a physician or poison control center immediately. Do not induce vomiting. Immediately rinse mouth and drink plenty of water. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Never give anything by mouth to an unconscious person. Do not use mouth-to-mouth method if victim ingested the substance.

Most important symptoms/effects, acute and delayed

Burning pain and severe, corrosive skin damage. Permanent eye damage including blindness could result. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Shortness of breath.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Symptoms may be delayed. Keep victim under observation.

General information

In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Use extinguishing agent suitable for type of surrounding fire.

Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire. Do not use halogenated extinguishing agents.

Specific hazards arising from the chemical

The product itself does not burn. May decompose upon heating to produce corrosive and/or toxic fumes. Contact with metal may release flammable hydrogen gas.

Special protective equipment and precautions for firefighters

Fire fighters should enter the area only if they are protected from all contact with the material. Full protective clothing, including self-contained breathing apparatus, coat, pants, gloves, boots and bands around legs, arms, and waist, should be worn. No skin surface should be exposed.

Fire-fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Following product recovery, flush area with water.

Small Spills: Absorb spill with vermiculite or other inert material. Clean surface thoroughly to remove residual contamination.

Environmental precautions

Never return spills in original containers for re-use. For waste disposal, see Section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Use caution when combining with water; DO NOT add water to caustic; ALWAYS add caustic to water while stirring to minimize heat generation. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe mist or vapor. Use only with adequate ventilation. Wear appropriate personal protective equipment. Transfer and storage systems should be compatible and corrosion resistant. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Store in a cool, dry, well-ventilated place. Store in corrosive resistant container with a resistant inner liner. Store away from incompatible materials (See Section 10). Store at temperatures not exceeding 40°C/104°F. Compatible storage materials may include, but not be limited to, the following: nickel and nickel alloys, steel, plastics, plastic or rubber-lined steel, FRP, or Derakane vinyl ester resin. Do not allow material to freeze.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	PEL	2 mg/m ³

US. ACGIH Threshold Limit Values

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m ³

US NIOSH Pocket Guide to Chemical Hazards: Ceiling Limit Value and Time Period (if specified)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m ³

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear chemical goggles and face shield.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Respirator type: Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state

Liquid

Form

Viscous liquid.

Color

Clear.

Odor

Odorless.

Odor threshold

Not available.

pH

14

Melting point/freezing point

50 - 53 °F (10 - 11.87 °C) (50% solution)

Initial boiling point and boiling range

266 - 284 °F (130 - 140 °C) (50% solution)

Flash point

Not available

Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	23.76 mm Hg (approximately) (77 °F (25 °C))
Vapor density	Not available.
Relative density	3.25 (50% solution)
Relative density temperature	68 °F (20 °C)
Solubility(ies)	Completely miscible with water.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Molecular formula	NaOH
Molecular weight	40.1 g/mol

10. Stability and reactivity

Reactivity	Contact with metal may release flammable hydrogen gas.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Reacts violently with strong acids. This product may react with oxidizing agents. Do not mix with other chemicals. Corrosive to aluminum, tin, zinc, copper and most alloys in which they are present including brass and bronze. Corrosive to steels at elevated temperatures above 40°C (104°F).
Incompatible materials	Oxidizing agents, Acids, Phosphorus, Aluminum, Zinc, Tin. Initiates or catalyzes violent polymerization of acetaldehyde, acrolein or acrylonitrile.
Hazardous decomposition products	Contact with metals (aluminum, zinc, tin) and sodium tetrahydroborate liberates hydrogen gas.

11. Toxicological information

Information on likely routes of exposure	
Ingestion	Causes digestive tract burns. Harmful if swallowed.
Inhalation	May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns.
Eye contact	Causes severe eye burns. Causes serious eye damage.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity Harmful if swallowed.

Product	Species	Test Results
Sodium Hydroxide Solution 30 - 54%		
Acute		
Dermal		
LD50	Rabbit	> 2 g/kg
Oral		
LD50	Rat	300 - 500 mg/kg

Product	Species	Test Results
<i>Other</i> LD50	Mouse	40 mg/kg, Intraperitoneal
Skin corrosion/irritation	Causes severe skin burns and eye damage. Standard Draize Test: 500 mg/24 hour(s) skin - rabbit severe.	
Serious eye damage/eye irritation	Causes severe eye burns. Causes serious eye damage. Standard Draize Test: 400 µg eyes - rabbit mild; 1 percent eyes - rabbit severe.	
Respiratory sensitization	No data available.	
Skin sensitization	No data available.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
Reproductive toxicity	No data available.	
Specific target organ toxicity - single exposure	Not available.	
Specific target organ toxicity - repeated exposure	Not available.	
Aspiration hazard	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.	
Chronic effects	Prolonged exposure may cause chronic effects.	

12. Ecological Information

Product	Species	Test Results
Sodium Hydroxide Solution 30 - 54%		
<i>Aquatic</i> <i>Acute</i> Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>) 99 mg/l, 48 hours Mosquitofish (<i>Gambusia affinis affinis</i>) 125 mg/l, 96 hours
Persistence and degradability	Expected to degrade rapidly in air.	
Bioaccumulative potential	The product is not expected to bioaccumulate.	
Mobility in soil	Not available.	
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal Instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

DOT	
UN number	UN1824
UN proper shipping name	Sodium hydroxide solution
Transport hazard class(es)	8
Subsidiary class(es)	-
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	B2, IB2, N34, Y7, TP2

Packaging exceptions 154
Packaging non bulk 202
Packaging bulk 242

IATA

UN number UN1824
UN proper shipping name Sodium hydroxide solution
Transport hazard class(es) 8
Subsidiary class(es) -
Packaging group II
Environmental hazards No
Labels required 8
ERG Code 8L

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number UN1824
UN proper shipping name SODIUM HYDROXIDE SOLUTION
Transport hazard class(es) 8
Subsidiary class(es) -
Packaging group II
Environmental hazards

Marine pollutant No
Labels required 8
EmS F-A, S-B

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US OSHA Specifically Regulated Substances (29 CFR 1910.1001-1060)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Sodium hydroxide (CAS 1310-73-2) LISTED

Superfund Amendments and Reauthorization Act of 1980 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - Yes

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations

US Massachusetts RTK - Substance List

Sodium hydroxide (CAS 1310-73-2)

Sodium Hydroxide Solution 30 - 54%

918752 Version #: 01 Revision date: - Issue date: 20-December-2013

SDS US
6 / 7

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Sodium hydroxide (CAS 1310-73-2)

US. Rhode Island RTK

Sodium hydroxide (CAS 1310-73-2)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

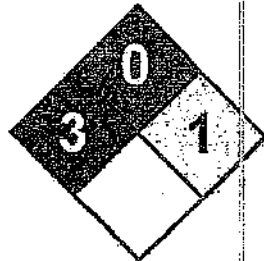
Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 20-December-2013
Revision date -
Version # 01
NFPA Ratings



List of abbreviations

LD50: Lethal Dose, 50%.
LC50: Lethal Concentration, 50%.
EC50: Effective concentration, 50%.
TWA: Time weighted average.

References

EPA: AQUIRE database
HSDB® - Hazardous Substances Data Bank
US. IARC Monographs on Occupational Exposures to Chemical Agents
IARC Monographs. Overall Evaluation of Carcinogenicity
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/26/10
Receiving ID#	Composite BASD/BA70
Manifest# Line:	CR 7010/CR 855
Land Ban Cert Included	Yes No
EGT Approval#	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	J.H.
Sampled by	Client

ANALYSIS	UNIT	RESULTS	ANALYSIS	UNIT	RESULTS
Compatible? (RT#)	Yes No	(Yes)	Barium		
PCEs (ppm)(Only Waste Only)?			Calcium		
TOC (ppm)(CC Waste Only)?	N/A		Total Iron		
Flash Point (°F)	> 140		Magnesium		
pH (S.U.)	10.5		Sodium Chloride		
Cyanides? (mg/L)	< 30		Bicarbonates		
Sulfides? (ppm)	< 200		Carbonate		
Specific Gravity	0.99		TDS		
Physical Description	liquid		Resistivity		
Stream Consistency	Yes (No)	(No)	Sulfate		
Oil in Sample	Yes No	(Yes)			
Temperature	72°F				
Conductivity	< 0.1 mS				
% Solids					
Turbidity	Yes No	(Yes)			
Color (visual)	Brown				
TSS (%)					
Radiation Screen (as needed)	Negative				
Lab Signature					

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

28470 Ctr'n Dr, Romulus, MI 48174. Telephone 734 946 1000. Fax 734 946 1002

Generator Waste Profile

Profile # **01019**

GENERATOR INFORMATION

Name:

Fac:

City:

Contact:

BILLING INFO

Company Name:

Address:

City:

Attention:

WASTE INFORMATION

Name of Waste/Common Chemical Name:

Sulfur Hexafluoride Acid

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

ETCHING TITANIUM ANODES

USEPA / STATE WASTE IDENTIFICATION

- This waste is considered to be: Non Hazardous Liquid Industrial Waste Hazardous Waste
- Regulated by TSCA? Yes No (PCBs, etc.)
- List ALL Applicable Waste Codes: D002 D006 D008 D011

PHYSICAL CHARACTERISTICS OF WASTE

Color: <input type="checkbox"/> White/Clear <input type="checkbox"/> Black/Brown <input checked="" type="checkbox"/> Other <u>Purple</u>	Suspended Solids <input checked="" type="checkbox"/> 0-1% <input type="checkbox"/> 3-5% <input type="checkbox"/> 1-3% <input type="checkbox"/> > 6%	Layers: <input type="checkbox"/> Multi-Layered <input type="checkbox"/> Bi-Layered <input checked="" type="checkbox"/> Single Phase	Specific Gravity: <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 <u>1.14</u>	<u>accept</u> <u>08/19/16</u>
--	--	---	---	----------------------------------

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 - 0 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>85</u>	<u>75</u>	<u>Carbonium</u>	<u>max</u>	<u>200</u>
<u>Sulfuric Acid</u>	<u>17</u>	<u>13</u>	<u>Lead</u>	<u>max</u>	<u>15</u>
<u>Titanium Metal Powder</u>	<u>5</u>	<u>2.5</u>	<u>Silica</u>	<u>max</u>	<u>200</u>
<u>Ascorbic Acid</u>	<u>1</u>	<u>0</u>			
<u>Bacteria</u>	<u>3.4</u>	<u>0</u>			

Metals: Indicate if this waste contains any of the following metals. If Generator knowledge-provide backup
 Lab Analysis Generator Knowledge TCLP TOTAL

	Not Present	Concentration		Not Present	Concentration				
POB	<input type="checkbox"/>	_____ ppm	Aromatic Amine	<input type="checkbox"/>	_____ ppm	Arsenic (As)	D004	<input type="checkbox"/>	< 5 ppm
Dioxin	<input type="checkbox"/>	_____ ppm	Pesticides	<input type="checkbox"/>	_____ ppm	Barium (Ba)	D005	<input type="checkbox"/>	< 100 ppm
Cyanides Reactive	<input type="checkbox"/>	_____ ppm	Rodenticides	<input type="checkbox"/>	_____ ppm	Cadmium (Cd)	D006	<input type="checkbox"/>	< 1 ppm
Cyanides Total	<input type="checkbox"/>	_____ ppm	Fungicides	<input type="checkbox"/>	_____ ppm	Chromium (Cr)	D007	<input type="checkbox"/>	< 5 ppm
Sulfides Reactive	<input type="checkbox"/>	_____ ppm				Lead (Pb)	D008	<input type="checkbox"/>	< 5 ppm
Sulfides Total	<input type="checkbox"/>	_____ ppm				Mercury (Hg)	D009	<input type="checkbox"/>	< 0.2 ppm
						Selenium (Se)	D010	<input type="checkbox"/>	< 1 ppm
						Silver (Ag)	D011	<input type="checkbox"/>	< 5 ppm

TCLP Organics D012 - D043 above regulatory limits: Present Not Present

IS WASTE ANY OF THE FOLLOWING? *At Least One Box Must Be Checked.*
 Radioactive Water Reactive Oxidizer Shock Sensitive Reactive (other) DOT Explosives
 NIOSH Human-Positive Carcinogens NESHAP Wastes (Benzene, etc.) Biological None Apply

SHIPPING INFORMATION

- Is this a DOT Hazardous Material (49CFR 172.101 & 173 Subpart D)? Yes No
- Reportable Quantity (RQ) in pounds _____
- DOT Shipping Name RD, UN1789, Weak Hydrochloric Acid Solution, 8, PG II Hazard Class 8 UN 1789
 PG II ERG 157 Hazardous Constituents for "n.o.s." N.A.
- Method of Shipment: Bulk Tanker Van truck Rail Car Drums Totes
- Number of Units to Ship Now: _____ 6. Anticipated Volume / Units per Year: VARIES or One Time
- Special Handling Requirements including PPE: _____

CERTIFICATION STATEMENT

I hereby represent and warrant that I have personally examined and am familiar with the information contained and submitted in this and all attached documents. Based on my inquiry and personal knowledge of those individuals responsible for supplying or obtaining the information, the information contained herein is true, accurate, and complete to the best of my knowledge and belief. Furthermore, no material fact has been omitted as to make this information misleading. I understand that others may rely on this representation and warranty in the handling and processing of the waste material described herein. If this box is checked , I request Environmental Geo-Technologies not to correct any inconsistencies. Any corrections Environmental Geo-Technologies makes will be consistent with the results of the sample characterization and analysis.

Printed Name _____

Generator _____

GENERATOR'S CHAIN OF CUSTODY RECORD INSTRUCTIONS: PLEASE collect a representative 1-quart sample of the waste described in the above referenced GENERATOR'S WASTE PROFILE REPORT using an appropriate container. A representative sample is one obtained using any of the applicable sampling methods cited in 40 CFR 261-Appendix 1. Fill in the sampling information in the spaces provided below. If you have problems obtaining a representative sample of your waste, please contact your Environmental Geo-Technologies representative.

- SAMPLING METHOD _____
- COLLECTION POINT _____
- SAMPLE COLLECTOR'S NAME, TITLE, EMPLOYER _____
- Sample No. _____ Preservation: Yes No



6. CHAIN OF CUSTODY *Each person who handles the sample must sign below when the sample passes from one to another.*

Relinquished by:	Received by:	Date	Time
_____	_____	_____	_____



01019

Date Printed: 05/07/84

Chemical Waste Management, Inc.

Profile #

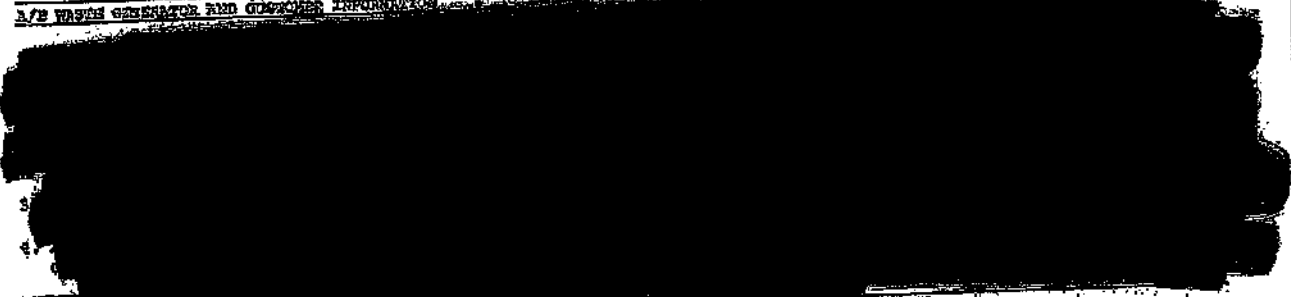
GENERATOR'S WASTE PROFILE SHEET

VIC 08894314

Check here if this is a Recertification

LOCATION OF ORIGINAL VICKROY Environmental, Inc.

A. WASTE GENERATOR AND COMPANY INFORMATION



C. WASTE CHARACTERIZATION

1a Process Generating Waste: PRODUCTION OF POLYMER

1b Waste Name: [REDACTED]

1c Color: [REDACTED]

1d Storage: Single Layer Multi-layer

1e Physical State: Solid Liquid Gas Slurry Paste Viscosity: 200 cP to 500 cP

1f pH Range: 8 to 11 or Not Applicable W.L. Closed Cap Open Cap

1g Liquid Flash Points: 73F 75-99F 100-139F 140-199F [REDACTED]

2a Is this a RCRA hazardous waste (40 CFR Part 261)? Yes No

2b Identify all waste listed and characteristic waste code numbers (D, E, F, U): [REDACTED]
State Waste Codes: Summ as RCRA Codes

2c Do underlying hazardous constituents (HACs) apply (40 CFR 261.43)?

2d Is the waste predominantly debris subject to the Alternative Debris Standards (40 CFR 261.43)?

2e Is the waste predominantly soil subject to the Alternative Soil Treatment Standards (40 CFR 261.43)?

2f Does the waste contain asbestos? If yes, is waste friable? Non-friable or both

2g Waste contains benzene in concentrations ppm (see 40 CFR 261.43)?

2h Is waste remediation from a major source of fine air pollutants (see Remediation Permit, 40 CFR 63 subpart 9999)?

2i Waste contains PCBs (> 1 ppm, regulated by 40 CFR 761.7)?

2j CHEMICAL COMPOSITION: List all constituents (incl. halogenated organics) present in any concentration and forward analysis

Constituents	Range		Unit Description
	Min	Max	
WATER	78 to	81	%
HYDROCHLORIC ACID	13 to	17	%
ETHYLENE GLYCOL MONOMER	0 to	5	g/g
ACETONE	0 to	1	g/g
METHYL	0 to	3.4	g/g
OTHER	0 to	3.0	g/g
TOTAL COMPOSITION (MAY EXCEED 100%)	107.00000		

See attach 2
Lead 0-15774
Silver 0-200ppm

2k Is the waste: Pyrophoric Water-reactive Shock sensitive Oxidizer Carcinogen Infectious Other

2l Is waste Group I carcinogen or residual under Hazardous Organic NESHAP?

2m Does the waste contain radioactive material? Regulated by NRC Is radioactive waste NESHAP

2n Is the waste a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up?

2o This is a wastewater.

2p Physical Appearance: SINGLE PHASE LOW VISCOSITY

2q If waste subject to the land ban & water treatment standards, check here: I supply analytical results where applicable.

2r Tracking Number: _____

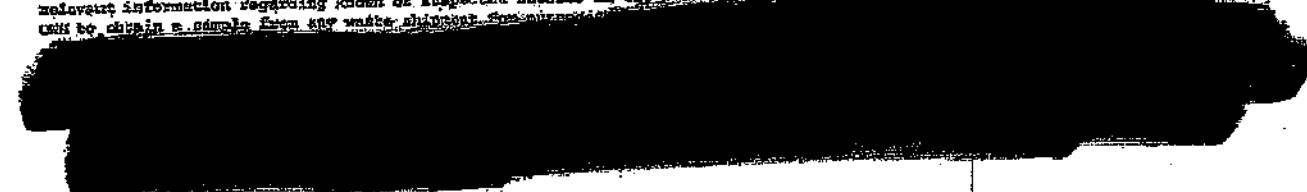
D. DOT Information and Shipping Volume

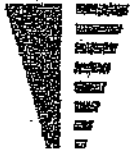
2s Anticipated Annual Volume: 200000 Units: DRUMS Shipping Frequency: WEEK

2t Packaging: Bulk Solid Bulk Liquid Drum Type/Size: OUTSIDE Other _____

GENERATOR'S CERTIFICATION

I hereby certify that all information submitted in this and all attached documents contains true and accurate descriptions of this waste. Any sample submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. All relevant information regarding known or suspected hazards in the possession of the generator has been provided. I authorize the generator to obtain a sample from any waste shipment for analysis.



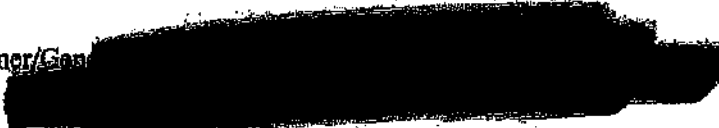


VICKERY VICKERY ENVIRONMENTAL, INC.
 3956 State Route 412, Vickery, OH 43464
 Phone: 419/547-7791 Fax: 419/547-6144

PROFILE AMENDMENT

Thursday, November 12, 2015

Customer/Gen
 Profile



acc. 11/19
08.19.16

The correction that needs to be made to the profile is as follows:

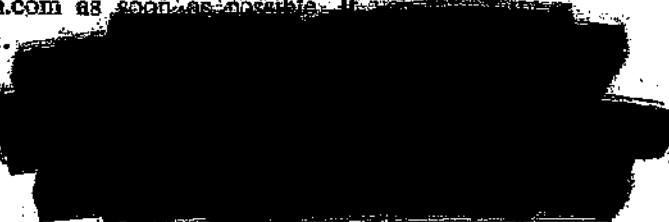
Change Sulfuric Acid to 0-5%

Additional Information:

Please sign/date and fax a copy of this letter back to Vickery Environmental Inc. at (419) 547-6144 or email cgolamb@wm.com as soon as possible. If you have any questions, please call us at (419) 547-7791.

Generator or Authorized Agent

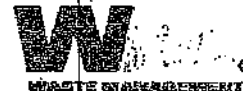
Print



Sincerely,

Carolyn Golamb

Carolyn Golamb
 Deepwell Account Manager



ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

28470 Citrin Dr, Romulus, MI 48174. Telephone 734 846 1000. Fax 734 946 1002

Generator Waste Profile

Profile # **01020**

GENERATOR INFORMATION

Name: [REDACTED]

Facility Address: [REDACTED]

City: [REDACTED]

County: [REDACTED]

BILLING INFORMATION

Company Name: [REDACTED]

Address: [REDACTED]

City: [REDACTED]

Attention: [REDACTED]

WASTE INFORMATION

Name of Waste/Common Chemical Name:

HRSG WASTEWATER

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

Boiler system chemical cleaning wastewater and flush for new power plant.

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: D007

PHYSICAL CHARACTERISTICS OF WASTE

Color: <input type="checkbox"/> White/Clear <input type="checkbox"/> Black/Brown <input checked="" type="checkbox"/> Other <small>Dark Green/ Yellow</small>	Suspended Solids <input checked="" type="checkbox"/> 0-1 % <input type="checkbox"/> 3-5 % <input type="checkbox"/> 1-3 % <input type="checkbox"/> > 5%	Layers: <input type="checkbox"/> Multi-Layered <input type="checkbox"/> Bi-Layered <input checked="" type="checkbox"/> Single Phase	Specific Gravity: <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> <i>08.25.16</i>
--	---	---	---	--------------------------------------

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 - 0.00 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
AMMONIUM	9000	0 PPM %	Iron	5000	30 PPM %
CITRATE	0	3 %	WATER	100	33 %
DISSOLVED CHROMIUM	500	0 PPM %			
OIL AND GREASE	250	0 PPM %			

Metals: Indicate if this waste contains any of the following metals. If Generator knowledge-provide backup

<input type="checkbox"/> Lab Analysis	<input checked="" type="checkbox"/> Generator Knowledge	<input type="checkbox"/> TCLP	<input type="checkbox"/> TOTAL
---------------------------------------	---	-------------------------------	--------------------------------

	Not Present	Concentration		Not Present	Concentration		ppm		ppm
PCB	<input checked="" type="checkbox"/>	_____	Aromatic Amine	<input checked="" type="checkbox"/>	_____	Arsenic (As)	D004	<input type="checkbox"/>	< 5 ppm
Dioxins	<input checked="" type="checkbox"/>	_____	Pesticides	<input checked="" type="checkbox"/>	_____	Barium (Ba)	D005	<input type="checkbox"/>	< 100 ppm
Cyanides Reactive	<input checked="" type="checkbox"/>	_____	Rodenticides	<input checked="" type="checkbox"/>	_____	Cadmium (Cd)	D008	<input type="checkbox"/>	< 1 ppm
Cyanides Total	<input checked="" type="checkbox"/>	_____	Fungicides	<input checked="" type="checkbox"/>	_____	Chromium (Cr)	D007	<input checked="" type="checkbox"/>	< 5 ppm
Sulfides Reactive	<input checked="" type="checkbox"/>	_____				Lead (Pb)	D009	<input type="checkbox"/>	< 5 ppm
Sulfides Total	<input checked="" type="checkbox"/>	_____				Mercury (Hg)	D009	<input type="checkbox"/>	< 0.2 ppm
						Selenium (Se)	D010	<input type="checkbox"/>	< 1 ppm
						Silver (Ag)	D011	<input type="checkbox"/>	< 5 ppm

TCLP Organics D012 - D043 above regulatory limits: Present Not Present

IS WASTE ANY OF THE FOLLOWING? At Least One Box Must Be Checked.

Radioactive Water Reactive Oxidizer Shock Sensitive Reactive (other) DOT Explosives

NIOSH Human-Positive Carcinogens NESHAP Wastes (Benzene, etc.) Biological None Apply

SHIPPING INFORMATION

1. Is this a DOT Hazardous Material (49CFR 172.101 & 173 Subpart D)? Yes No

2. Reportable Quantity (RQ) in pounds 30,000

3. DOT Shipping Name 20, 401042, HAZARDOUS WASTE, LIQUID, N.O.S., (CHROMIUM, IRON), 9, PG III (D007) Hazard Class 9 UN/NA NA3082

PG III ERG TBD Hazardous Constituents for "n.o.s." CHROMIUM, IRON

4. Method of Shipment: Bulk Tanker Vac truck Rail Car Drums Totes

5. Number of Units to Ship Now: 150 6. Anticipated Volume / Units per Year: _____ or One Time

6. Special Handling Requirements including PPE: _____

CERTIFICATION STATEMENT

I hereby represent and warrant that I have personally examined and am familiar with the information contained and submitted in this and all attached documents. Based on my inquiry and personal knowledge of those individuals responsible for supplying or obtaining the information, the information contained herein is true, accurate, and complete to the best of my knowledge and belief. Furthermore, no material fact has been omitted as to make this information misleading. I understand that others may rely on this representation and warranty in the handling and processing of the waste material described herein. If this box is checked , I request Environmental Geo-Technologies not to correct any inconsistencies. Any corrections Environmental Geo-Technologies makes will be consistent with the results of the sample characterization.

Printed Name: _____

Generator's Signature: _____

GENERATOR'S CHAIN OF CUSTODY RECORD INSTRUCTIONS: PLEASE collect a representative sample of the waste described in the above referenced GENERATOR'S WASTE PROFILE REPORT using an appropriate container. A representative sample is one obtained using any of the applicable sampling methods cited in 40 CFR 261-Appendix 1. Fill in the sampling information in the spaces provided below. If you have problems obtaining a representative sample of your waste, please contact your Environmental Geo-Technologies representative.

1. SAMPLING METHOD	2. COLLECTION POINT
3. SAMPLE COLLECTOR'S NAME, TITLE, EMPLOYER	
4. Sample No.	Preservation: Yes <input type="checkbox"/> No <input type="checkbox"/>

5. CHAIN OF CUSTODY. Each person who handles the sample must sign below when the sample passes from one to another.

Relinquished by: (Signature)	Date	Received by: (Signature)	Date	Time
_____	_____	_____	_____	_____

GENERATOR INFORMATION

Name: _____

Fac: _____

City: _____

Cont: _____

BILLING INFORMATION

Company Name: _____

Address: _____

City: _____

State: _____

Zip Code: _____

Attention: _____

Phone: () _____

Fax () _____

WASTE INFORMATION

Name of Waste/Common Chemical Name:

C-Phos SIR

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

Phosphoric Acid / Zinc Phosphate / Nitric Acid from Coating

USEPA / STATE WASTE IDENTIFICATION

- This waste is considered to be: Non Hazardous Liquid Industrial Waste Hazardous Waste
- Regulated by TSCA? Yes No (PCBs, etc.)
- List ALL Applicable Waste Codes: D202

PHYSICAL CHARACTERISTICS OF WASTE

Color: <input type="checkbox"/> White/Clear <input type="checkbox"/> Black/Brown <input type="checkbox"/> Other _____	Suspended Solids <input type="checkbox"/> 0-1% <input type="checkbox"/> 3-5% <input type="checkbox"/> 1-3% <input type="checkbox"/> >5%	Layers: <input type="checkbox"/> Multi-Layered <input type="checkbox"/> Bi-Layered <input type="checkbox"/> Single Phase	Specific Gravity: <input type="checkbox"/> <0.8 <input type="checkbox"/> 1.0-1.2 <input type="checkbox"/> 0.8-1.0 <input type="checkbox"/> 1.3-1.4 Exact / Other _____	acceptable 08.24.16
---	--	--	--	------------------------

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 - 410 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
Nitric Acid	4	10			%
Phosphoric Acid	5	15			%
Zinc Dihydrogen Phosphate	8	10			%
Zinc Nitrate	6	10			%

Metals: Indicate if this waste contains any of the following metals. If Generator knowledge provide backup

- Lab Analyze Generator Knowledge - MSDS (Attached) TCLP TOTAL

Table with columns for metal types (e.g., PCB, Dioxins, Cyanides, Sulfides, Aromatic Amine, Pesticides, Fungicides, Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver), concentration units, and checkboxes for presence.

TCLP Organics D012 - D048 above regulatory limits: Present Not Present

IS WASTE ANY OF THE FOLLOWING?

At Least One Box Must Be Checked.

- Radioactive Water Reactive Oxidizer Shock Sensitive Reactive (other) DOT Explosives
 NIOSH Human-Poitive Carcinogens NESHAP Wastes (Benzene, etc.) Biological None Apply

SHIPPING INFORMATION

1. Is this a DOT Hazardous Material (49CFR 173.101 & 173 Subpart D)? Yes No

2. Reportable Quantity (RQ) in pounds _____

3. DOT Shipping Name: Phosphoric Acid Solution, N.O.S. Hazard Class 8 (UN) 1805

PG 11 ERG 154 Hazardous Constituents for "n.o.s." phosphoric acid

4. Method of Shipment: Bulk Tanker Vco truck Rail Car Drums Pails

5. Number of Units to Ship Now: _____ 6. Anticipated Volume / Units per Year: Varies or One Time

6. Special Handling Requirements including PPE: _____

CERTIFICATION STATEMENT

I hereby represent and warrant that I have personally examined and am familiar with the information contained and submitted in this and all attached documents. Based on my inquiry and personal knowledge of those individuals responsible for supplying or obtaining the information, the information contained herein is true, accurate, and complete to the best of my knowledge and belief.

Printed Name _____

Generator's _____

GENERATOR'S CHAIN OF CUSTODY RECORD INSTRUCTIONS: PLEASE collect a representative 1-quart sample of the waste described in the above referenced GENERATORS WASTE PROFILE REPORT using an appropriate container.

1. SAMPLING METHOD 2. COLLECTION POINT

3. SAMPLE COLLECTOR'S NAME, TITLE, EMPLOYER

4. Sample No. Preservation: Yes No

5. CHAIN OF CUSTODY Each person who handles the sample must sign below when the sample passes from one to another.

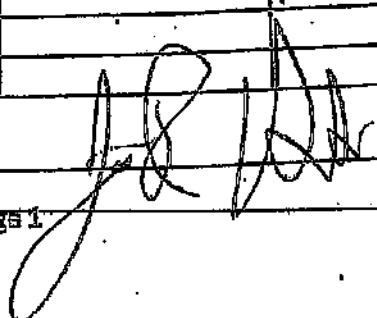
Table with 6 columns: Relinquished by (Signature), Date, Time, Received by (Signature), Date, Time

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	8/25/16
Receiving ID#	Zinc Phos Liquid
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Gen	
Site	
Transporter	
Time In	
Time out	
Received by	J. H.
Sampled by	C. J. S.

TESTS PERFORMED	RESULTS	TESTS PERFORMED	RESULTS
Compatible? (RT#)	Yes No	Barium	
PCEs (ppm)(Oily Waste Only)?	N/A	Calcium	
TOC (ppm)(CG Waste Only)?	N/A	Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	0.9	Sodium Chloride	
Cyanides? (mg/L)	230	Bicarbonate	
Sulfides? (ppm)	2200	Carbonate	
Specific Gravity	1.09	TDS	
Physical Description	liquid	Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes (No)		
Temperature	84°F		
Conductivity	47.4 uS		
% Solids	10.4		
Turbidity	Yes (No)		
Color (visual)	Colorless		
TSS (%)	3.01		
Radiation Screen (as needed)	Negative		
Lab Signature			



Century Chemical Corporation

SAFETY DATA SHEET
Globally Harmonized System (GHS)
centurychemical@sbcglobal.net

Version 8.7

Revision Date: 7/27/2015

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	C-Phos 51R	HMIS	
PRODUCT CODE:	10260	Health:	2
PRODUCT TYPE:	Coating	Flammability:	0
MANUFACTURER:	Century Chemical Corporation	Reactivity:	1
TELEPHONE:	313-340-0553	EMERGENCY:	800-424-9300
FAX:	313-340-7320		
ADDRESS:	7711 Lyndon Detroit, MI 48238		

2. HAZARD IDENTIFICATION

Emergency Overview:

OSHA Hazards:

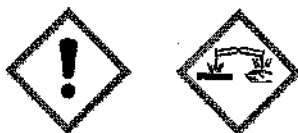
May be corrosive to metals
Harmful if swallowed
Causes severe skin burns and eye damage
Causes serious eye damage
Harmful if inhaled

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS):

Acute Toxicity, Inhalation (Category 4)
Acute Toxicity, Oral (Category 4)
Corrosive to metals (Category 1)
Eye Damage/Irritation (Category 1)
Skin Corrosion/Irritation (Category 1B)

GHS Label Elements, including Precautionary Statements

Pictogram(s)



Signal Word: DANGER

Precautionary Statement(s):

Keep only in original container.
Do not breathe dust/fume/gas/mist/vapours/spray.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash face, hands and any exposed skin thoroughly after handling.

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Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.
Rinse skin with water/shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a POISON CENTER or doctor/physician if you feel unwell.
Consult physician if concerned.
Wash contaminated clothing before reuse.
Absorb spillage to prevent material damage.
Store locked up.
Store in corrosive resistant container with a resistant inner liner.
Dispose of contents/container to comply with local, state and federal regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS-No.; EC-No.; Index-No.	Concentration (%)*
Nitric Acid	7697-37-2	4 - 10%
Phosphoric Acid	7664-38-2	5 - 15%
Zinc Dihydrogen Phosphate	13598-37-3	8 - 10%
Zinc Nitrate	10198-18-6	6 - 10%

* Exact concentrations are a trade secret. Percentage ranges are provided to assist users in providing appropriate protections.

** Declaration of ingredients according to Detergent Regulation 649/2004/EC

4. FIRST AID MEASURES

If inhaled: Remove person into fresh air from contaminated zone. Consult a physician.

In case of skin contact: Remove contaminated clothing and footwear. Wash off with plenty of water for a least 15 minutes. Seek immediate medical attention.

In case of eye contact: Rinse thoroughly with plenty of water for at list 15 minutes and seek immediate medical attention.

Ingestion: Get immediate medical attention. Do not induce vomiting. Give one to two glasses of water or milk. Never gave anything by mouth to a victim who is unconscious or is having seizures.

Symptoms: See Section 11.

Century Chemical Corporation

SAFETY DATA SHEET
Globally Harmonized System (GHS)
centurychemical@sbcglobal.net

5. FIRE FIGHTING MEASURES

Conditions of flammability:	Not flammable or combustible.
Suitable extinguishing media:	Use media appropriate for surrounding material.
Special protective equipment for firefighters:	Wear full protective clothing. Wear self-contained breathing apparatus.
Hazardous combustion products:	Irritating and toxic gases and fumes may be released during the fire.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions:**
Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.
- Environmental precautions:**
Prevent further leakage or spillage if safe to do so. Wear appropriate protective equipment and clothing during clean-up. Do not allow product to enter sewer or waterways. Discharge into the environment must be avoided.
- Methods and materials for containment and cleaning up**
Absorb the spill with inert material. Move material into appropriate closed containers for disposal. Dispose of according to Federal, State and local governmental regulations.

7. HANDLING AND STORAGE

- Precautions for safe handling:**
Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not take internally. Avoid breathing vapors or mists of this product. Never add water to product. For dilutions, add product slowly to water. Heat may be generated. For industrial use only.
- Conditions for safe storage:**
Keep only in original container. Store in corrosive resistant container with a resistant inner liner. Store locked up.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters:

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Nitric Acid	2 mg/l	2 mg/l	None	None
Phosphoric Acid	3 mg/m ³ STEL 1 mg/m ³ TWA	1 mg/m ³ PEL	None	None
Zinc Dihydrogen Phosphate	None	None	None	None
Zinc Nitrate	N/A	N/A	N/A	None

- Engineering controls:** Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from handling of this product.

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Globally Harmonized System (GHS)

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Respiratory protection:	If the ventilation is not sufficient to effectively prevent buildup of vapors or mists, appropriate NIOSH (US) or CEN (EU) respiratory protection must be provided.
Eye/face protection:	Safety goggles or face shield if splashing is possible.
Skin/body protection:	Wear chemical resistant impermeable gloves. Gloves should be tested to determine suitability for prolonged contact. Use of impervious apron and boots are recommended.
Hygiene measures:	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Light Green
Odor:	Pungent
Odor Threshold:	Not available
pH:	5.5-7.0
Vapor Pressure:	24 mm Hg @ 75° F
Boiling Point:	221
Melting Point:	Not applicable
Specific Gravity:	1.54 (at 50°)
Vapor Density:	Not applicable
Flash Point:	Not applicable
Lower Explosion Limit	Not applicable
Upper Explosion Limit	Not applicable
Ignition:	Not applicable
Temperature:	Not applicable
Auto-ignition:	Not applicable
Evaporation Rate:	Not applicable
Water Solubility:	Appreciable
Partition Coefficient: n-octanol/water:	Not applicable
VOC Constant:	Not applicable
Viscosity:	Not applicable
Decomposition Temperature:	Not applicable

10. STABILITY AND REACTIVITY

Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions	See: Reactivity
Hazardous decomposition products:	Phosphorus oxides, Carbon monoxide, Carbon dioxide. Thermal decomposition generates corrosive vapours.
Materials to avoid:	Strong acids, Strong bases.
Reactivity:	May react exothermically with water (moisture). Decomposes on exposure to temperature rise: release of toxic and corrosive gases/vapours (phosphorus oxides). May react on exposure to temperature rise with (some) metals: release of highly flammable gases/vapors (hydrogen). May react exothermically, violently, or explosively with (strong) oxidizers, bases, and reducers.
Conditions to avoid:	Direct Sunlight. Extremely high or low temperatures.

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11. TOXICOLOGICAL INFORMATION

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Nitric Acid	Inhalation - rat - 260 mg/m ³ /30M; 130mg/m ³ /4H (LC50)	Onset of symptoms may be delayed for 4 to 30 hours. In contact with the eyes, the liquid may produce severe burns which could result in permanent damage and visual impairment. Ingestion of the liquid may cause immediate pain and burns of the mouth, esophagus, and gastrointestinal tract.
Phosphoric Acid	Oral - rat - 1530 mg/kg	Skin Irritation, Eye Irritation, Respiratory Irritation, Corrosive
Zinc Dihydrogen Phosphate	Oral - rat - 300-2000 mg/kg	Blood, Central nervous system, Corrosive, Endocrine, Gastrointestinal, Immune system, Irritant, Metabolic
Zinc Nitrate	Oral - rat - 1,190 mg/kg	May cause respiratory irritation, fever, cough, nausea, vomiting, weakness

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Nitric Acid	No	No	Yes
Phosphoric Acid	No	No	No
Zinc Dihydrogen Phosphate	No	No	No
Zinc Nitrate	No	Suspected (Group 2A)	No

Reproductive toxicity: No data available

Teratogenicity: No data available

Specific target organ toxicity (Single exposure GHS): No data available

Specific target organ toxicity (Repeated exposure GHS): No data available

Aspiration hazard: No data available

Potential health effects/symptoms:

Inhalation: Mists, vapors or liquid may cause severe irritation or burns.

Ingestion: This product may produce corrosive damage to the gastrointestinal tract if it is swallowed. Ingestion of corrosive materials may result in moderately severe burns to mouth and esophagus with more severe burns and damage to the stomach.

Skin: Contact with this product may produce severe skin irritation including redness, inflammation and chemical burns.

Eyes: This product is severely irritating to the eyes and may cause irreversible damage including burns and blindness.

Signs/symptoms of exposure: To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

Synergistic effects: No data available

Additional information: N/A

RTECS: Not available

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12. ECOLOGICAL INFORMATION

General ecological information: Not available
Bioaccumulative potential: N/A
Mobility in soil: N/A
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Hazardous waste number: This product, if discarded, may be characterized as a RCRA corrosive waste, D002.

Disposal recommendations:

Remove waste in accordance with local and/or national regulations.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Phosphoric Acid Solution, n.o.s.
Hazard class or division: 8
Identification number: UN 1805
Packing group: II

International Air Transportation (ICAO/IATA)

Proper shipping name: Phosphoric Acid Solution, n.o.s.
Hazard class or division: 8
Identification number: UN 1805
Packing group: II

Water Transportation (IMO/IMDG)

Proper shipping name: Corrosive liquids, acidic, inorganic, N.O.S. (PHOSPHORIC ACID, ZINC NITRATE)
Hazard class or division: 8
Identification number: UN 1805
Packing group: II
Marine pollutant: Zinc Nitrate
Exceptions: Classified per IMDG Amendment 34; Effective Jan 1, 2010.

15. REGULATORY INFORMATION

United States Regulatory Information

Century Chemical Corporation

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TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification:	None above reporting de minimis
CERCLA/SARA Section 302 EHS:	None above reporting de minimis
CERCLA/SARA Section 311/312:	Immediate Health
CERCLA/SARA Section 313:	This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Zinc Nitrate (CAS #7779-88-6). Zinc dihydrogen phosphate (CAS# 13598-37-3).
CERCLA Reportable Quantity:	Zinc nitrate (CAS# 7779-88-6) 1,000 lbs. (454 kg.); Phosphoric acid (CAS# 7664-38-2) 5,000 lbs. (2,270 kg).
California Proposition 65:	This product does not contain any chemicals known to the state of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDSL Status:	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
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16. OTHER INFORMATION

Full text of H- and P-code(s) indicated in Section 2:

H290	May be corrosive to metals
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H332	Harmful if inhaled
P234	Keep only in original container.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash face, hands and any exposed skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P321	Consult physician if concerned.
P363	Wash contaminated clothing before reuse.

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P390	Absorb spillage to prevent material damage.
P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.
P501	Dispose of contents/container to comply with local, state and federal regulations.

Prepared by: Century Chemical Corporation

Further information

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. The stated SDS is reliable to the best of the company's knowledge and believed accurate as of the date indicated. However, no representation, warranty or guarantee of any kind, expressed or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.



280 South Wagner Road
 Ann Arbor, Michigan 48103
 Tel. 734/995-0995 Fax. 734/995-3731
 Michigan Laboratory ID: 9604
 Wisconsin Laboratory ID: 998321720

Semivolatile Organic Compounds Data Summary Sheet

For: Mr. Richard Powals
 Environmental Geo-Technologies, Inc.
 28470 Citrin Drive
 Romulus, MI 48174

ATS Project: Environmental Geo-Technologies, Inc. #E008-000
 Report Date: 9/29/16
 ATS SRF: 0907161

Sample Identification: August Composite 2016

Sample Date:	9/2/16	QC Batch Number:	QCORG0909161-E
Laboratory Receipt Date:	9/7/16		B6I0071
Preparation Date:	9/9/16, 9/14/16	Sample Matrix:	Wastewater
Analysis Date:	9/27/16, 9/16/16	Dilution Factor:	500

<u>Parameter (CAS)</u>	<u>Method</u>	<u>Units</u>	<u>Result</u>	<u>Reporting Limit</u>
Aldrin (309-00-2)	EPA 8270 Mod	mg/mL	<0.00001	0.00001
Benzidine (92-87-5)	EPA 8270 Mod	mg/mL	<0.00075	0.00075
N-Nitrosodimethylamine (62-75-9)	EPA 8270 Mod	mg/mL	<0.0001	0.0001
Tetraethyl Lead (78-00-2)	EPA 8270 Mod	mg/mL	<0.00005	0.00005
Hexachlorodibenzo-p-dioxins	EPA 1613B	mg/mL	<0.00000000005	0.00000000005
Octachlorodibenzofuran (39001-02-0)	EPA 1613B	mg/mL	<0.00000000005	0.00000000005
Octachlorodibenzo-p-dioxin (3268-87-9)	EPA 1613B	mg/mL	<0.00000000005	0.00000000005
atrachlorodibenzo-p-dioxins	EPA 1613B	mg/mL	<0.00000000004	0.00000000004

<u>Surrogates / Labeled Standards:</u>	<u>Method</u>	<u>Percent Recovery</u>	<u>Recovery Limits</u>
2-Fluorobiphenyl	EPA 8270 Mod	87.3	(50 - 150)
Nitrobenzene-d5	EPA 8270 Mod	84.5	(50 - 150)
p-Terphenyl-d14	EPA 8270 Mod	116.6	(50 - 150)
Tetrachloro-m-xylene (TCMX)	EPA 8270 Mod	73.5	(50 - 150)
13C-1,2,3,4,7,8-HxCDD	EPA 1613B	93.7	(32 - 141)
13C-1,2,3,6,7,8-HxCDD	EPA 1613B	90.1	(28 - 130)
13C-1,2,3,7,8,9-HxCDD	EPA 1613B	88.7	(32 - 141)
13C-OCDF	EPA 1613B	59.1	(17 - 157)
13C-OCDD	EPA 1613B	54.1	(17 - 157)
13C-2,3,7,8-TCDD	EPA 1613B	101.0	(25 - 164)

Comments:

SEPA Analysis 1613B performed by Vista Analytical.