Environmental GEO-Technologies, LLC

April 30, 2018

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

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

EGT did not accept any F039 waste in March, 2018 so no Page A-3 of 3 laboratory analyses are necessary to be submitted as part of this MR.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

We trust that you find this interim 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. rjp043018/EGTEPAMonthlyReport-March, 2018

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

AVERAGE INJECTION RATE

Calculation of Average Injection Rate

CURRENT REPORTING YEAR 2018

CURRENT REPORTING MONTH MARCH

Date (month, year) of the first injection into either well at the Citrin Road Facility _____

CURRENT MONTH (all volumes in gallons)

	Injected Waste	Injected Non-Waste	Total injected
MI-163-1W-C010, Well #1-12			
Current Month	181,354	0	181,354
Since facility first injected			13,845,282
MI-163-1W-C011, Well #2-12			
Current Month	0	0	0
Since facility first injected			4,648,736
		Lifetime Combined	18,494,018

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 52

52 lifetime number of months of injection × 43,830 minutes/month
= 2,279,160 minutes of injection

Lifetime combined injected volume 18,494,018 ÷ 2,279,160 minutes of injection
= 8.1 gpm average injection rate

WELL 1 DATA

Circle Chart Index

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

Chart Recorder #1

Channel #1

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

Channel #2

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

Channel #3

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

Channel #4

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

Chart Recorder #2

Channel #1

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

Channel #2

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

Channel #3

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

Channel #4

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

Chart Recorder #3

Channel #1

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

Channel #2

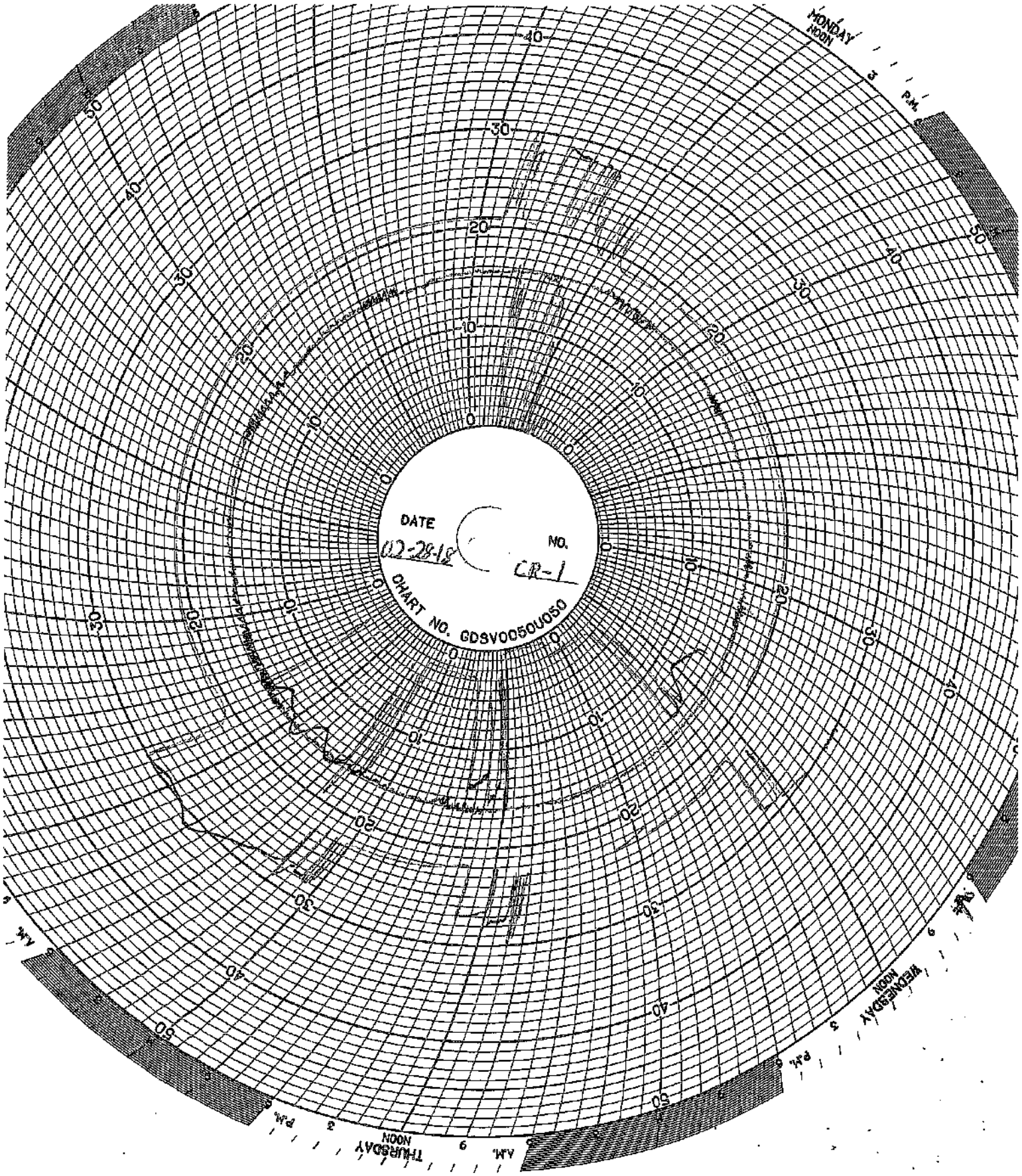
Red Pen – Well 1 Monthly Volume (chart value x 100,000)

Channel #3

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

Channel #4

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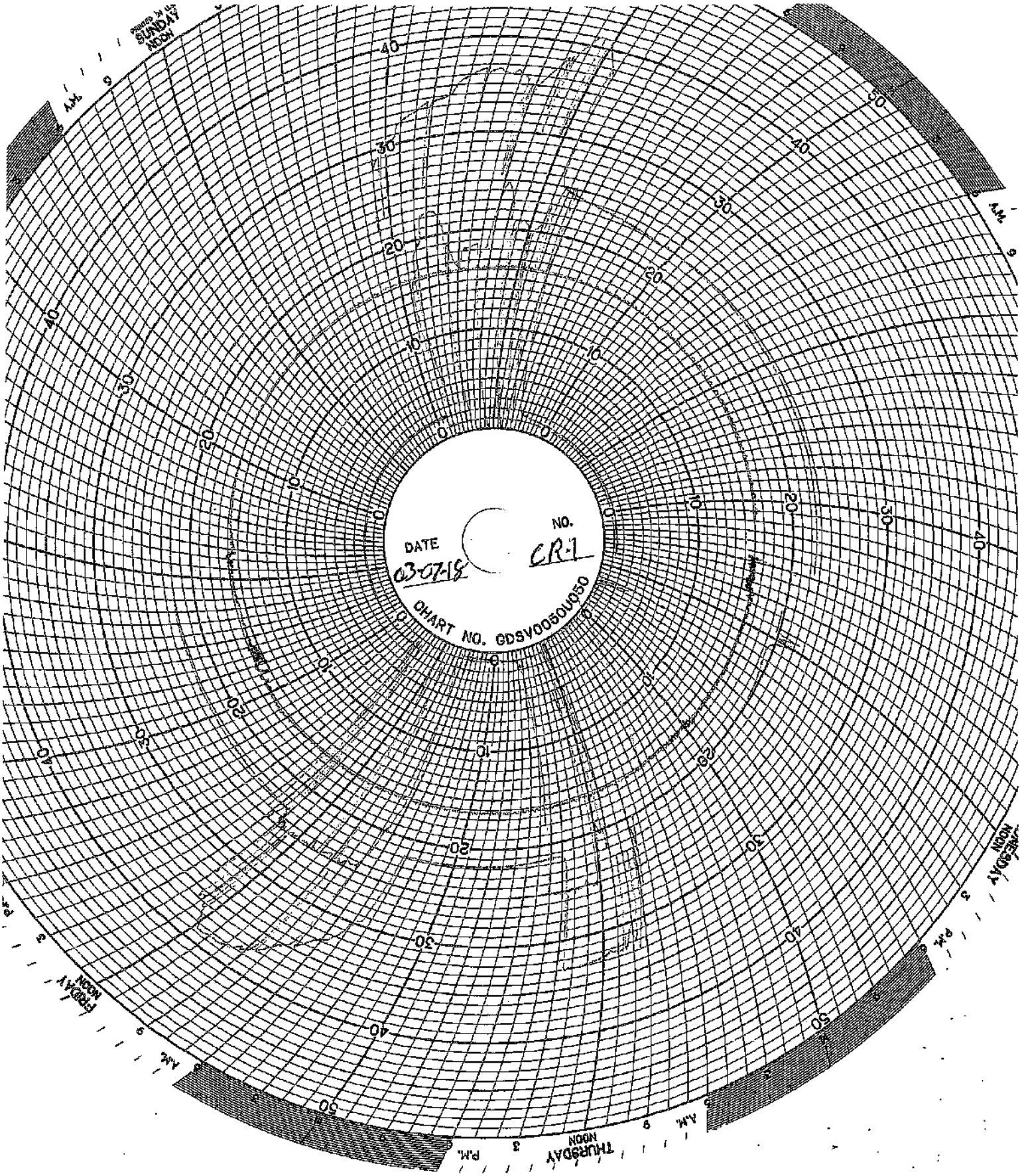
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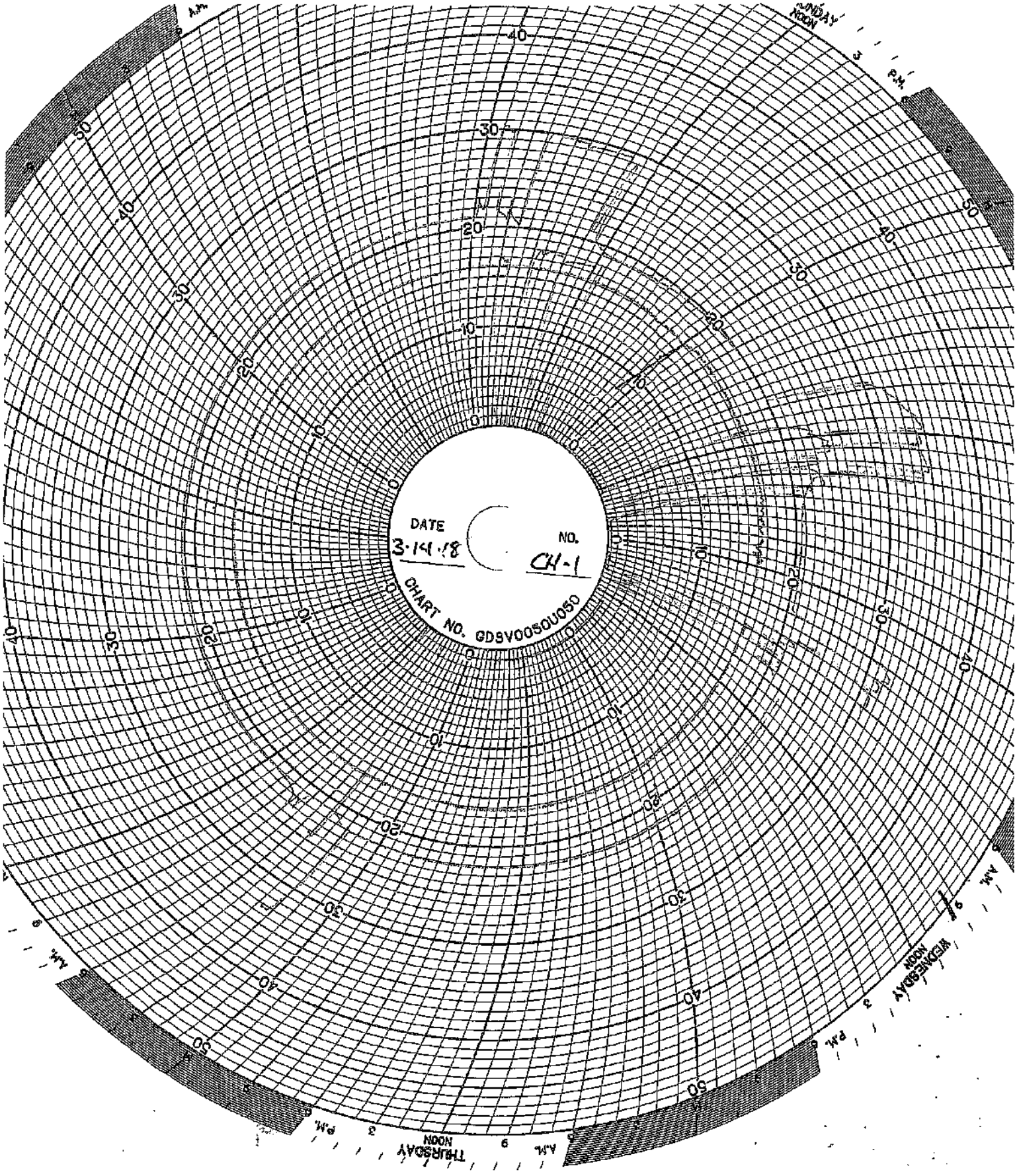
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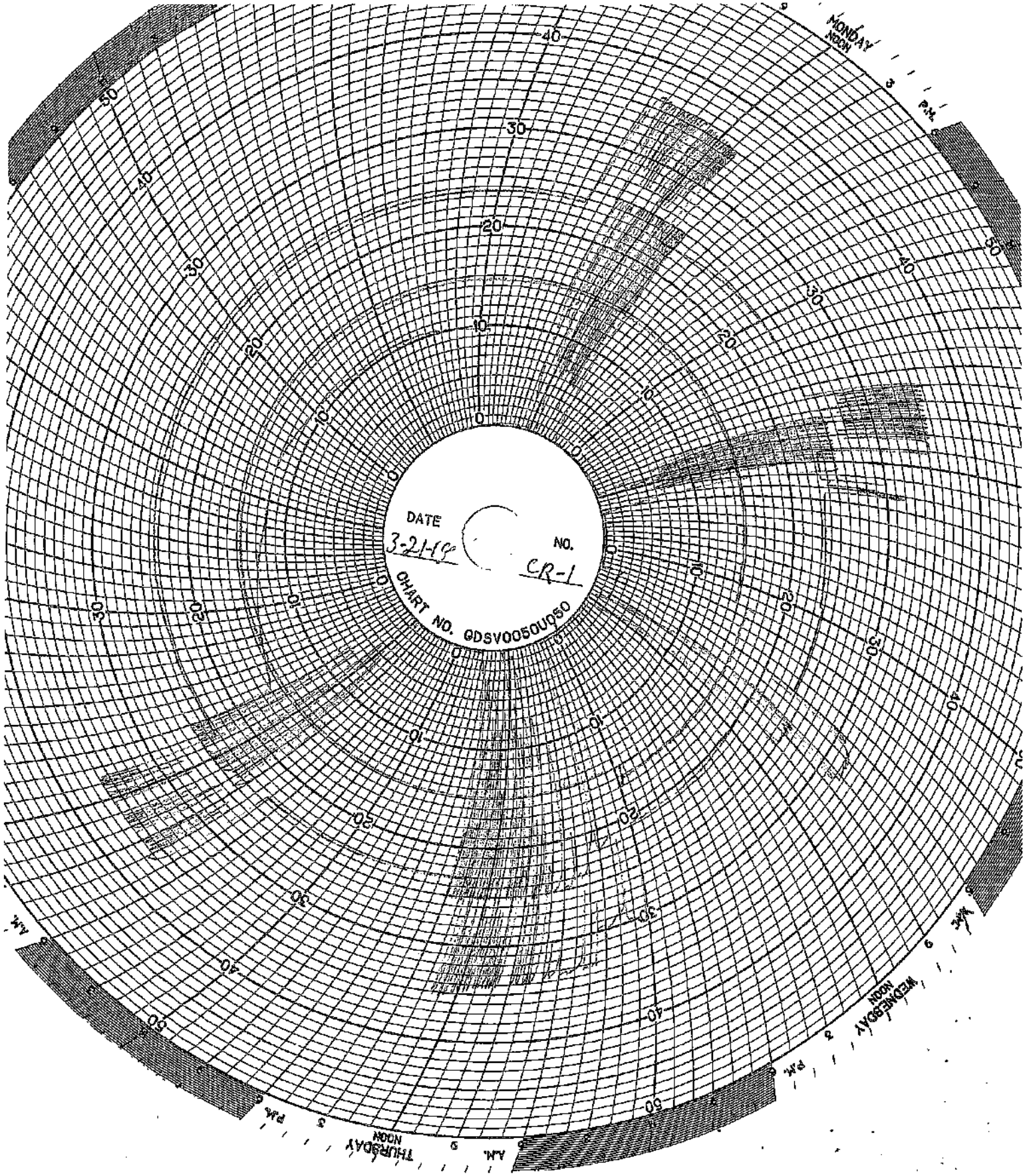
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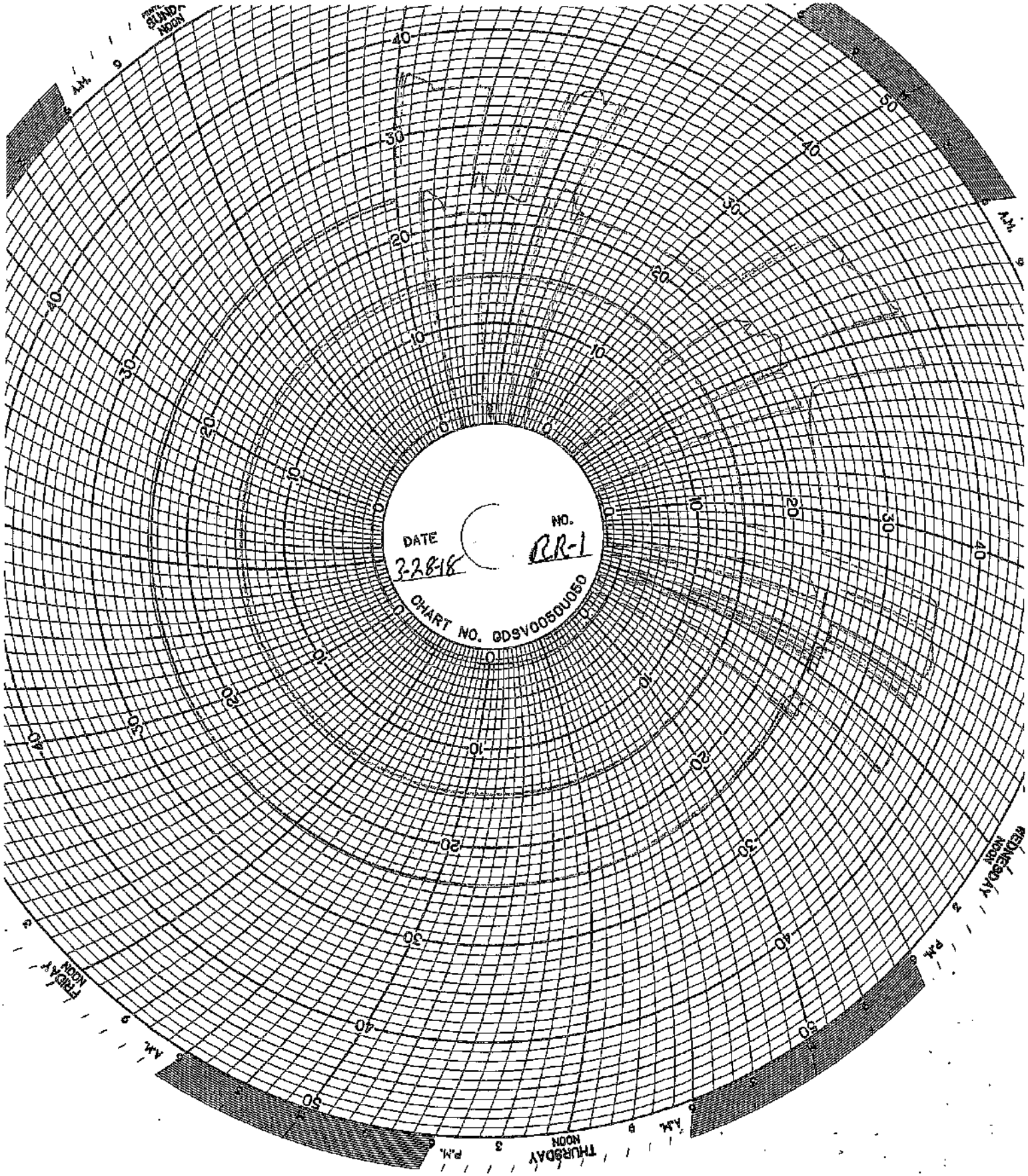
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WELL 2 DATA

Circle Chart Index

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

Chart Recorder #1

Channel #1

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

Channel #2

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

Channel #3

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

Channel #4

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

Chart Recorder #2

Channel #1

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

Channel #2

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

Channel #3

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

Channel #4

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

Chart Recorder #3

Channel #1

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

Channel #2

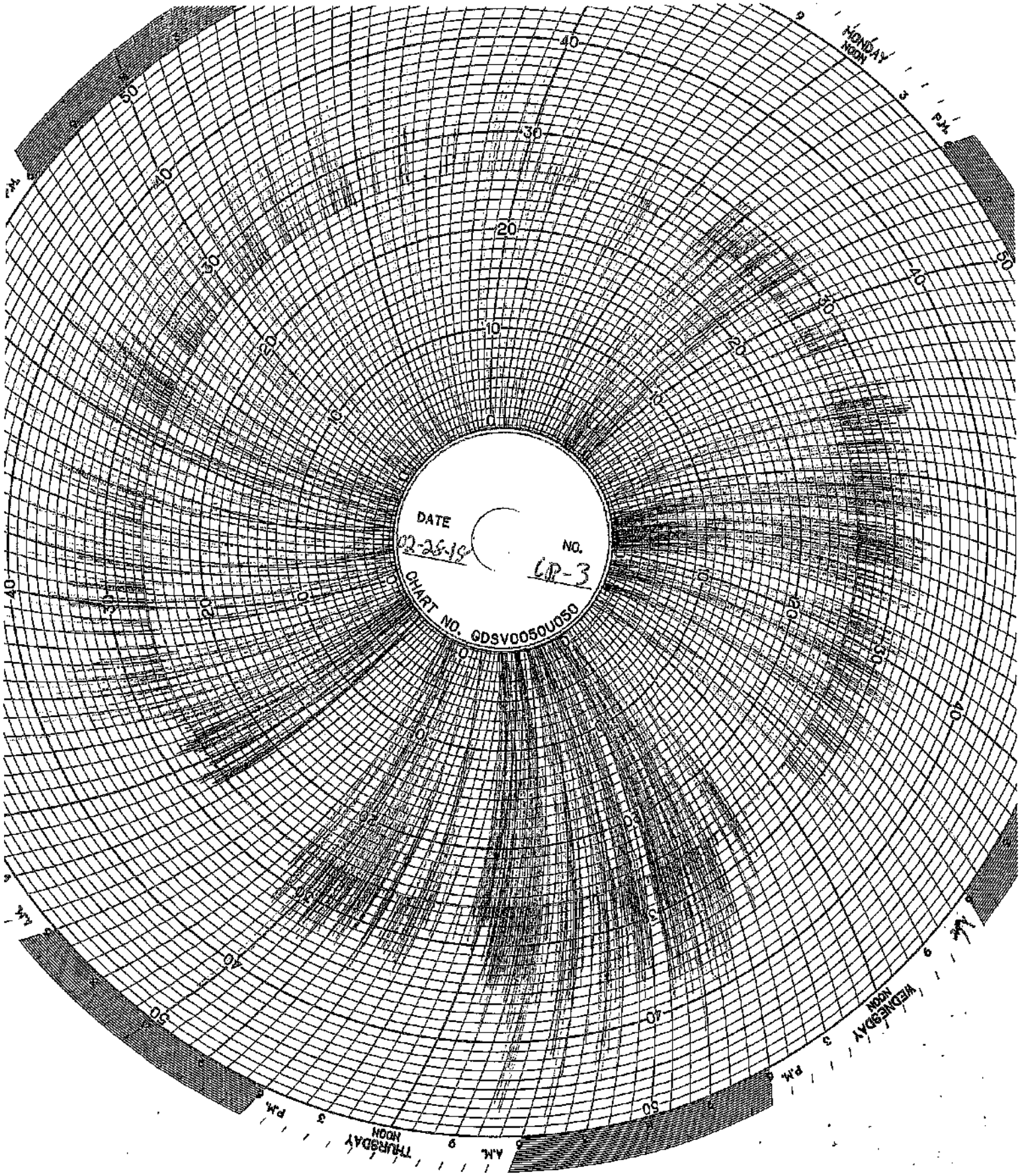
Red Pen – Well 1 Monthly Volume (chart value x 100,000)

Channel #3

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

Channel #4

Black Pen – Temperature (chart value x 0)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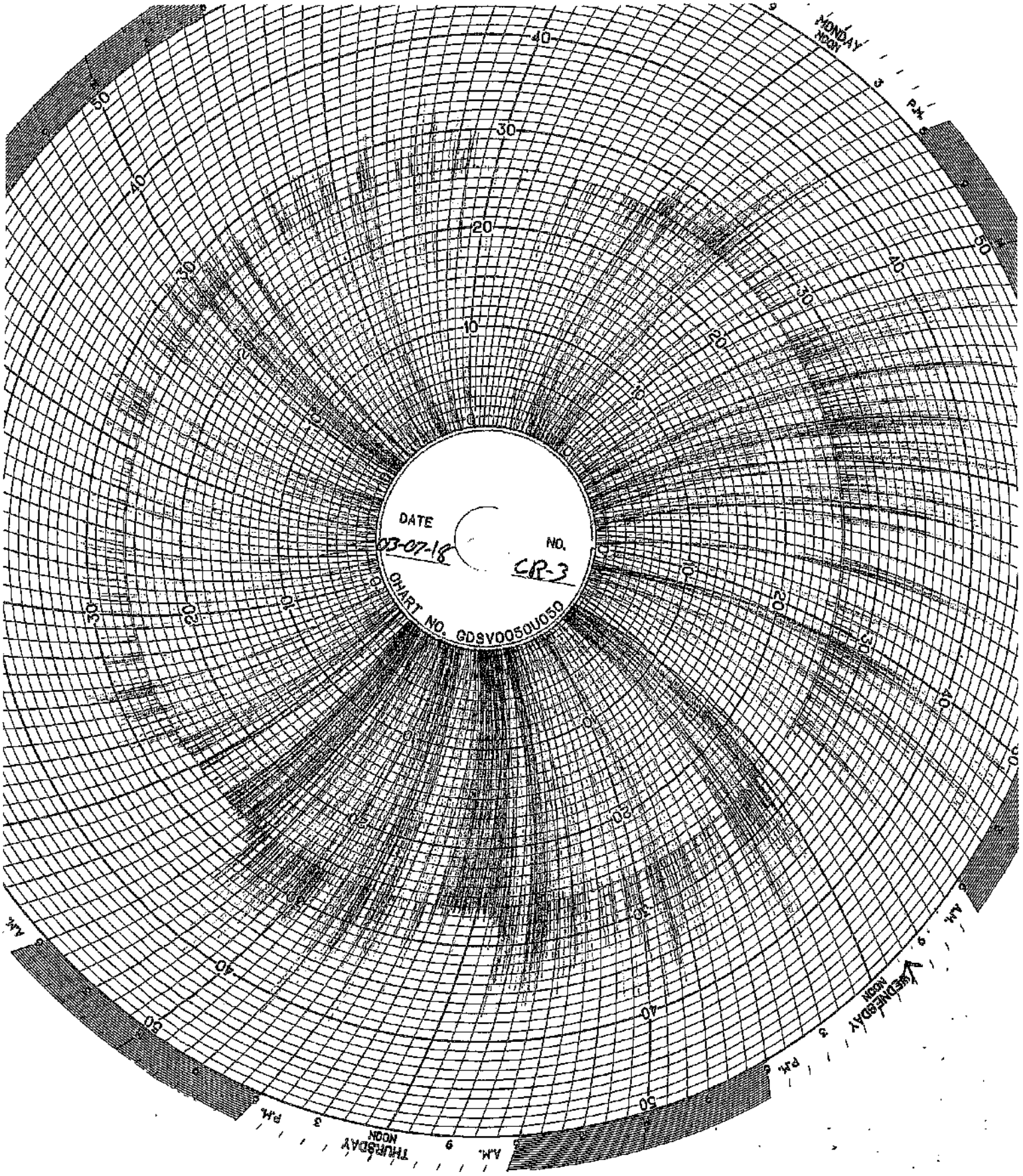
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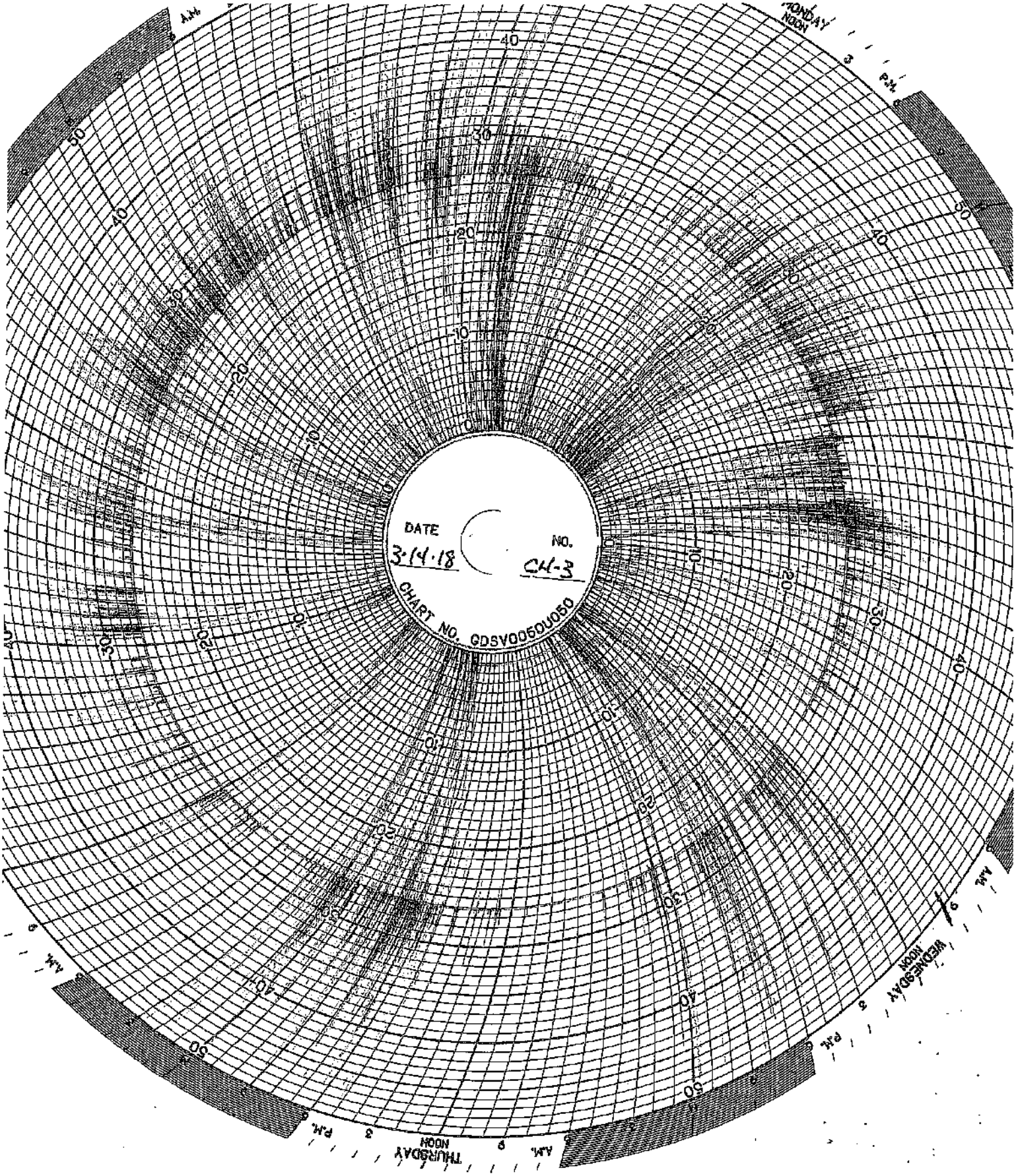
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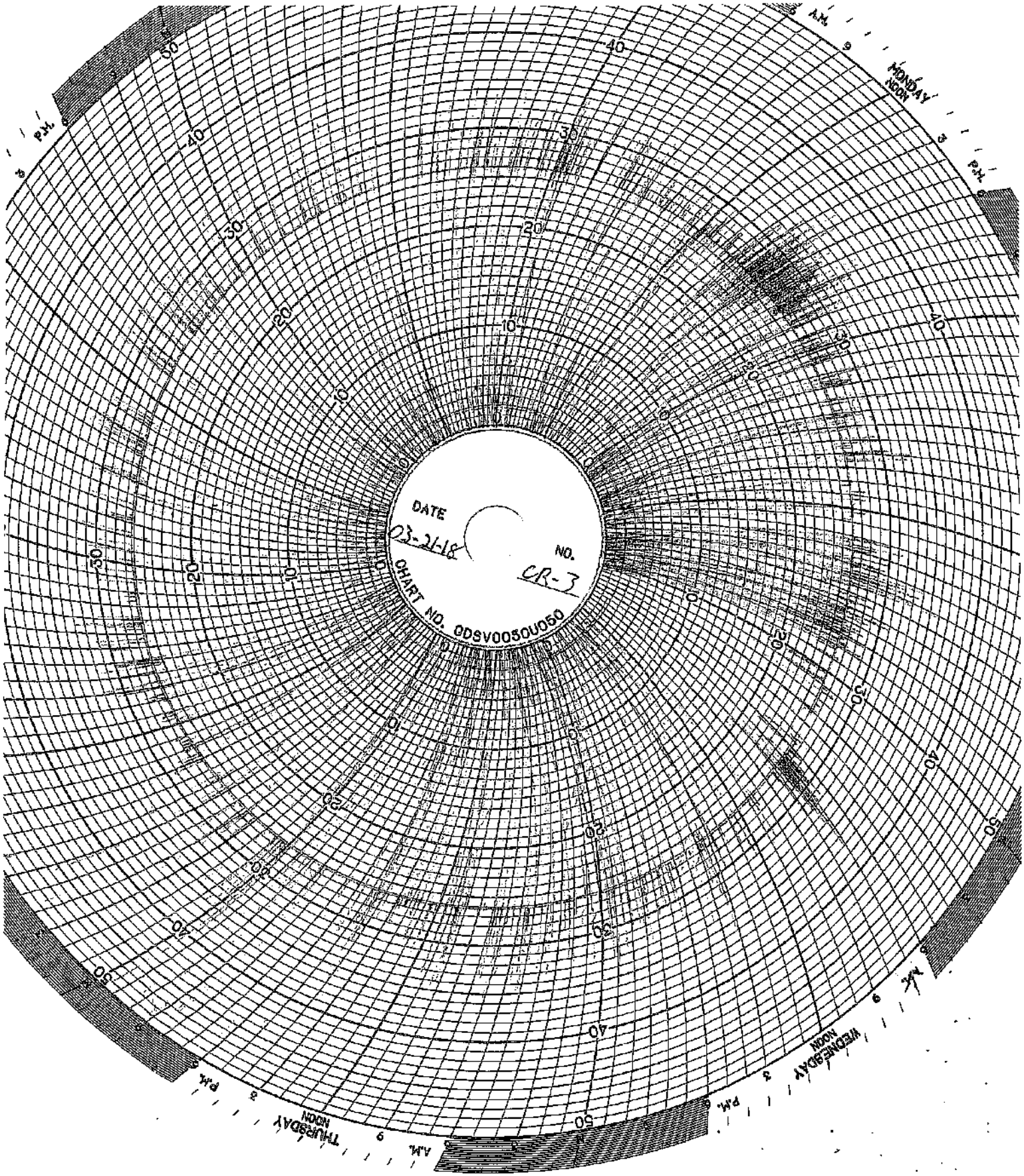
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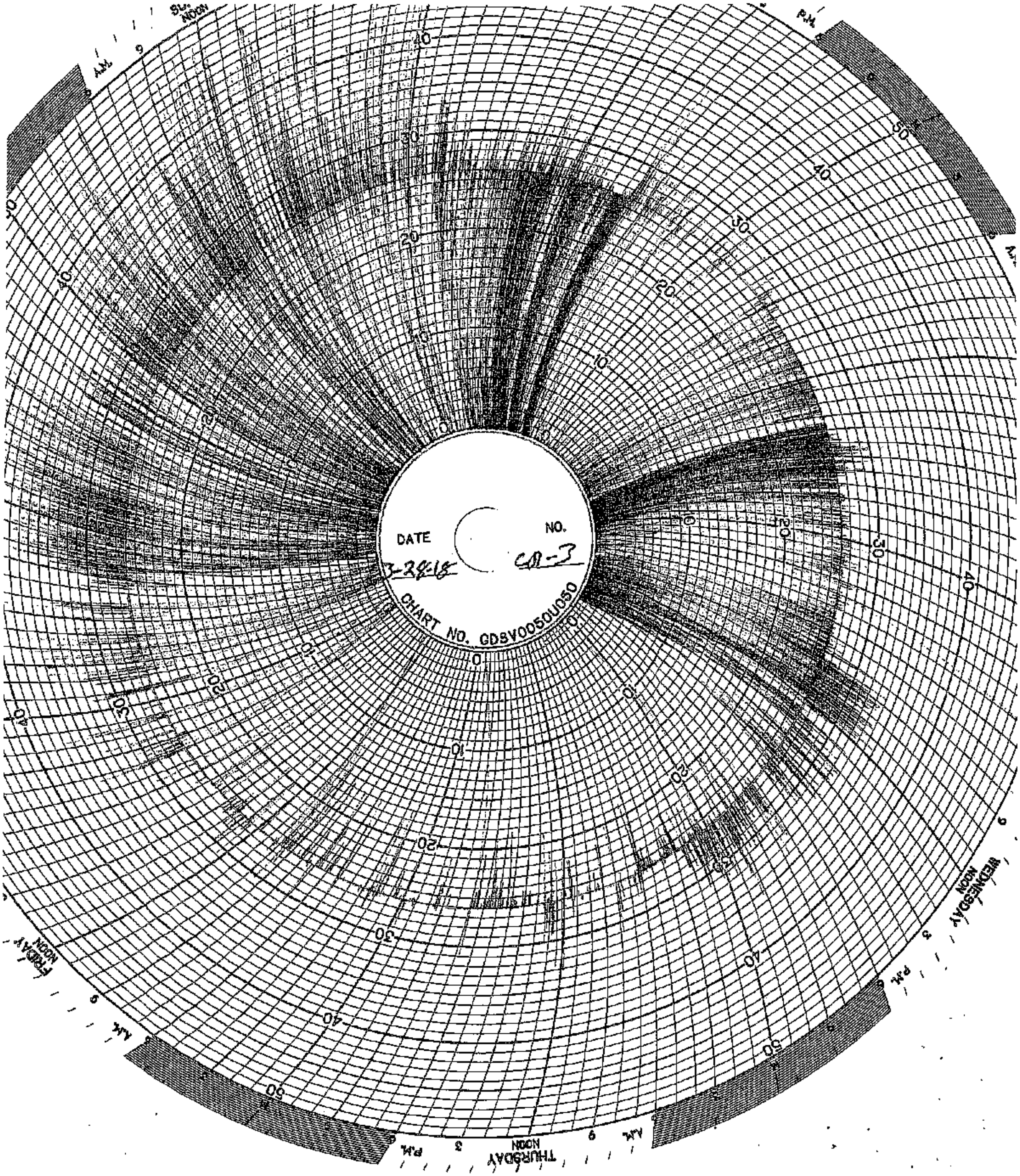
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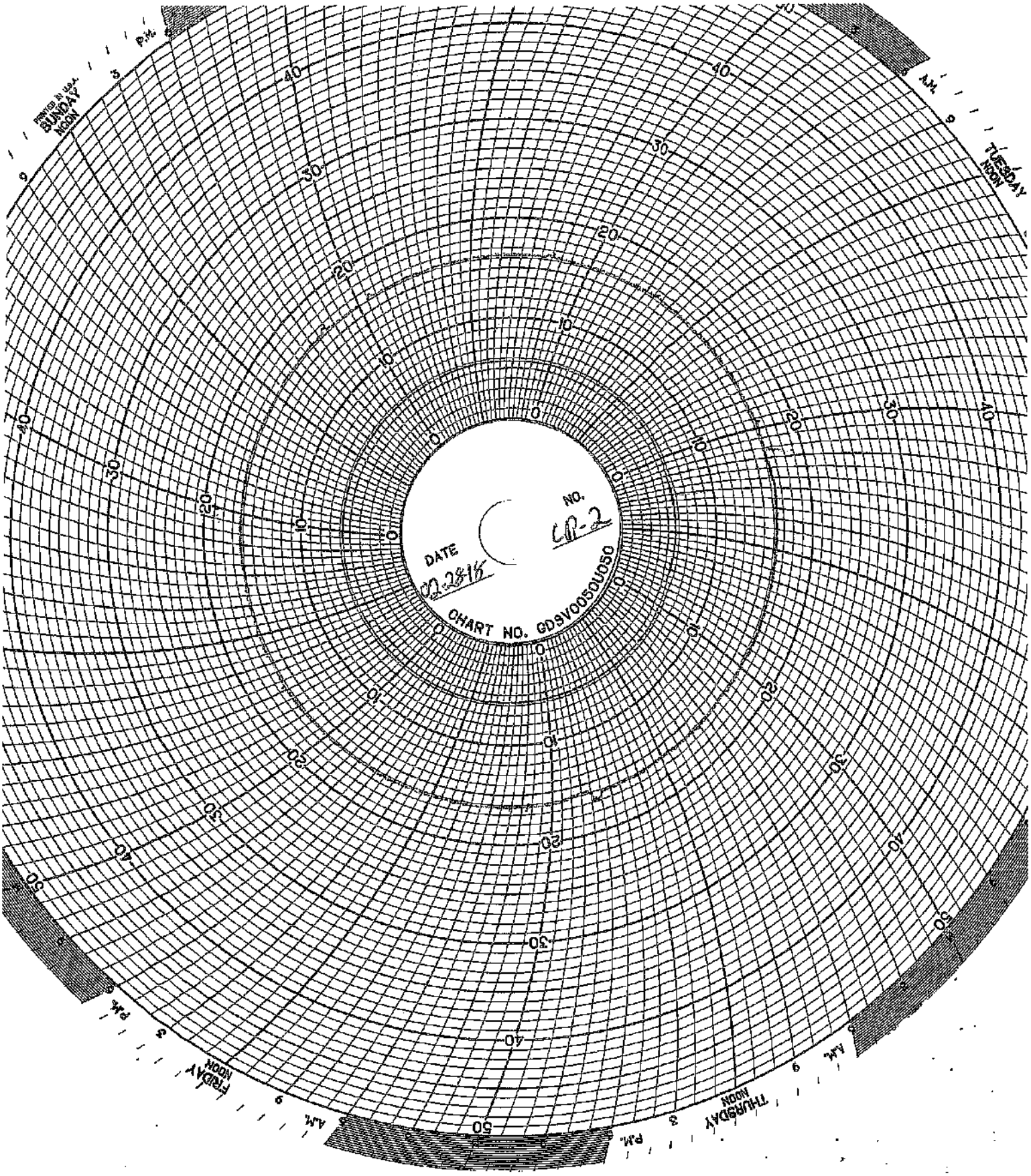
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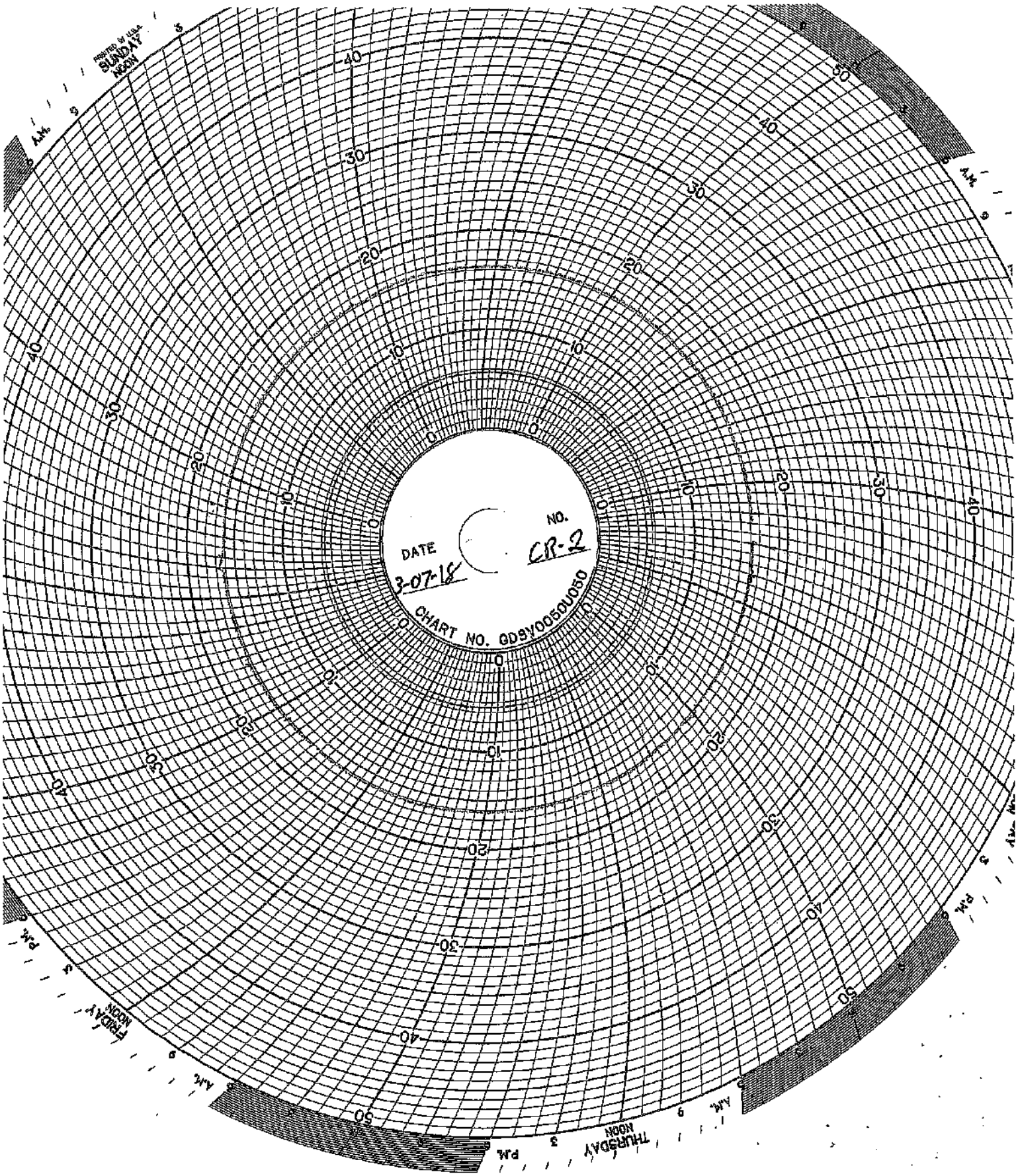
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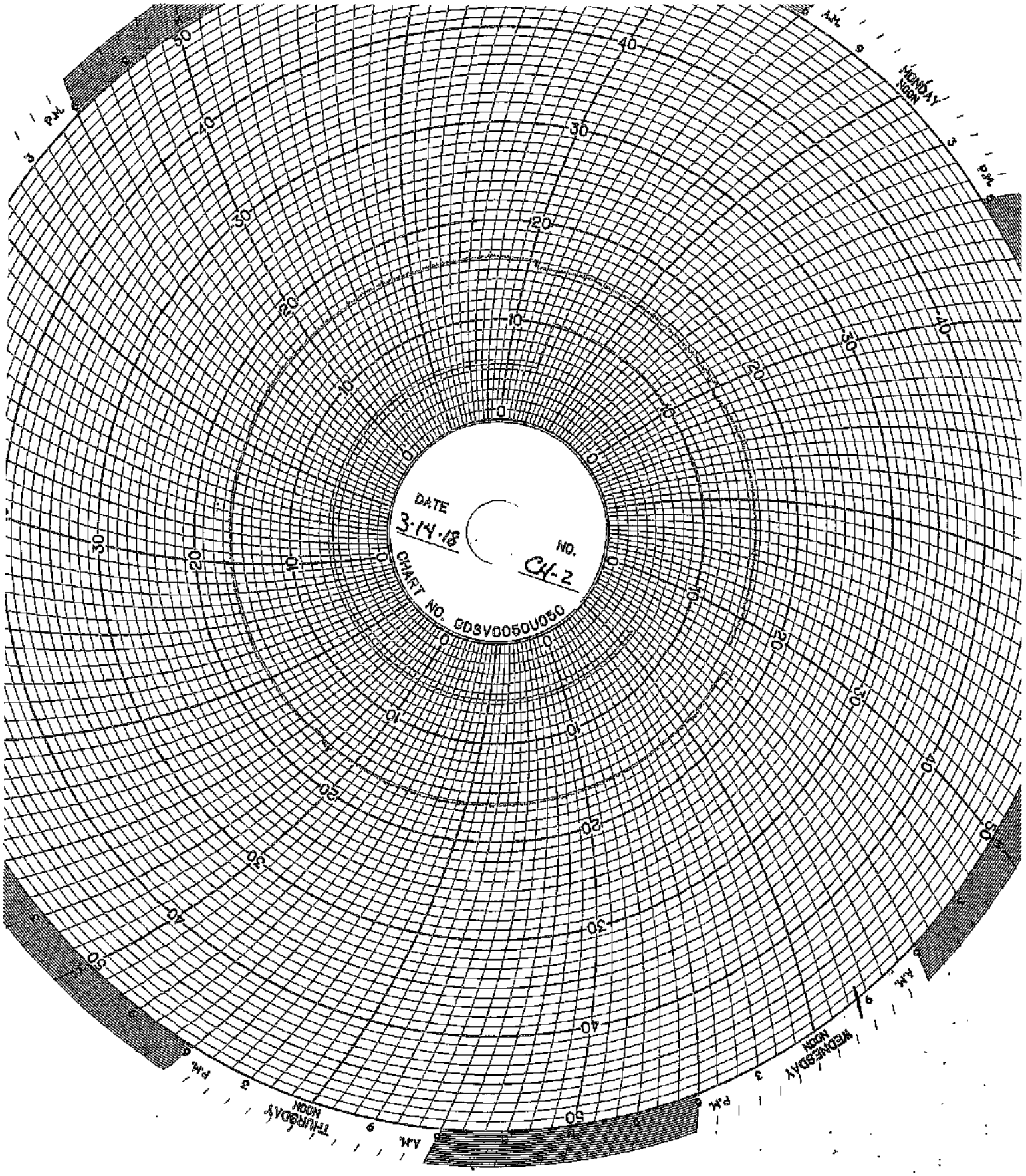
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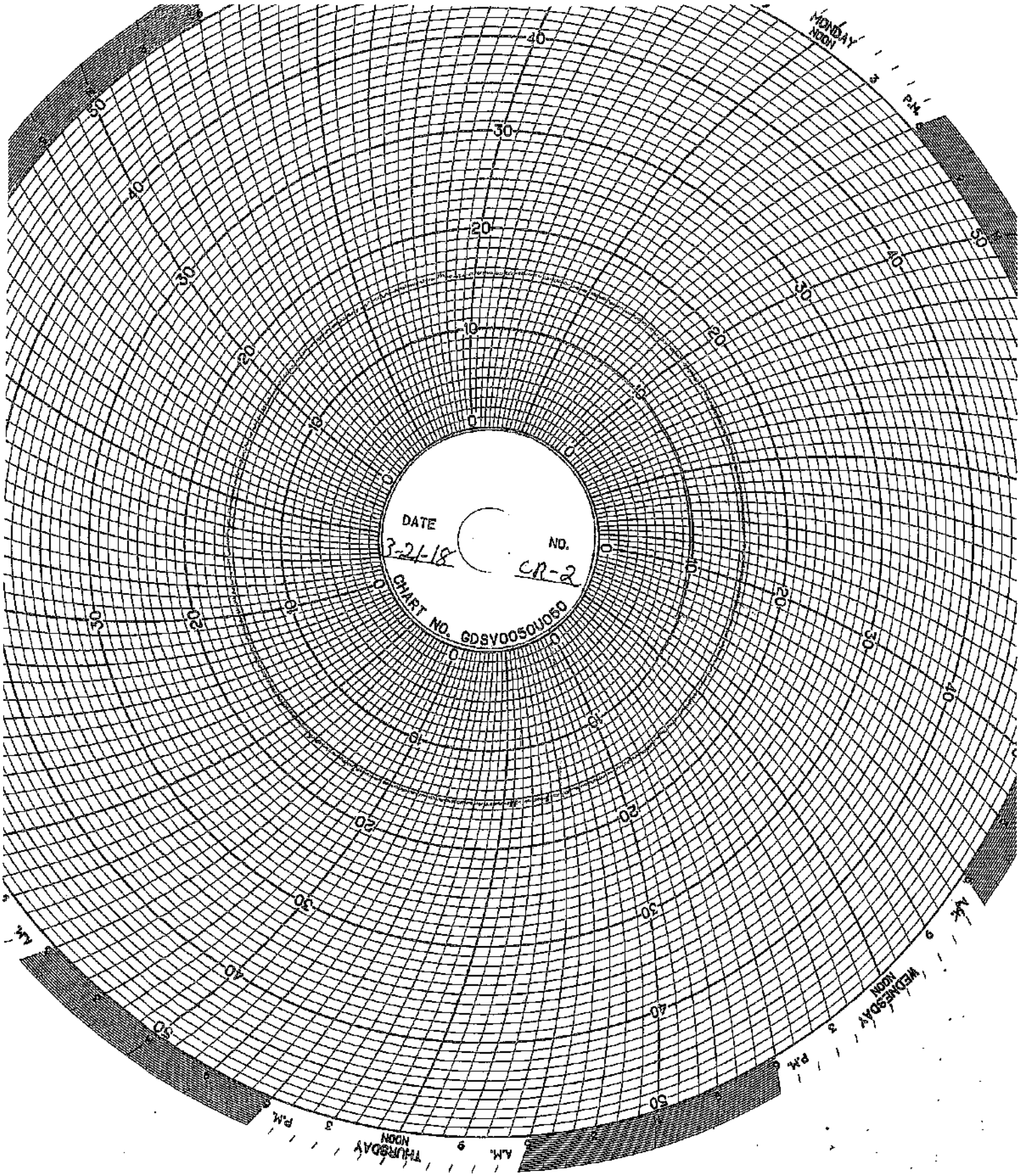
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MAINTENANCE LOG

UIC Monthly Maintenance Log

3/7/2018	Well 1	Replaced wellhead valve
3/8/2018	Well 1	Replaced springs in Hydra-cell injection pump
3/16/2018	Well 1	Replaced high pressure hose between piping and wellhead
3/19/2018	Well 1	Replaced reducer bushing on high pressure hose to wellhead

CORROSION MONITORING

CORROSION MONITORING COUPONS BASELINE VISUAL DESCRIPTION

November 4, 2013

Fiberglass

The fiberglass coupon is Red Box 2000 type and is 2-1/2 inches long by 1/2 inch wide and 1/4 inches thick. It is a dark orange (rust) in color with a glossy shine on one side a polished look on the opposite side and the cut edges look sanded.

Hastelloy

The hastelloy coupon is identified as C276 with serial number 1. The dimensions of the coupon are 3 inches long by 1/2 inch wide and 1/4 inch thick. The coupon is silver in color with a lightly sandblasted surface.

Stainless Steel

The stainless steel coupon is identified as 316L with serial number C1562. The dimensions of the coupon are 3 inches long by 1/2 inch wide and 1/4 inch thick. The coupon is silver in color with a lightly sandblasted surface.

CORROSION MONITORING COUPONS VISUAL DESCRIPTION

March 19, 2018

Fiberglass Coupon

The coupon is dark orange (rust) in color with similar semi-smooth textures on both sides. Its cut edges appear sanded. The coupon is free of pits, cracks, swelling, wicking and blemishes.

Hastelloy Coupon

This coupon is identified as C276 with Serial Number 5. The coupon is silver in color with a lightly sandblasted texture. It is clean and free of pits, cracks, and blemishes. There appears to be no effect on this coupon.

Stainless Steel Coupon

This coupon has experienced very minimal effect from corrosion.

GHESQUIERE PLASTIC TESTING, INC.

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

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

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

Attention: Mr. Don Anderson

WORK REQUESTED:

Perform Barcol Hardness test on sample submitted.

DESCRIPTION OF SAMPLE:

Sample submitted was identified as a fiberglass test coupon.

(P. O. #Credit Card).

WORK PERFORMED:

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

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

RESULTS:

The following determination was made based upon the above test:

BARCOL HARDNESS

	Hardness
Specimen 1	90

Specimen is being returned with this report for further evaluation.

GHESQUIERE PLASTIC TESTING, INC.

M. W. Ghesquiere
President

MWG/kmi

TOTAL 1 PAGES

GHESQUIERE PLASTIC TESTING, INC.

20450 HARPER AVENUE
HARPER WOODS, MI 48225
PHONE (313) 885-3595
FAX (313) 885-1771

Report Date: February 17, 2014
Test Date: February 14 - 17, 2014

Report #1402-78036
Performed for:
Environmental Geo-Technologies
28470 Citrin Drive
Romulus, MI 48174

Attention: Mr. Don Anderson

WORK REQUESTED:

Perform Barcol Hardness test on sample submitted.

DESCRIPTION OF SAMPLE:

Sample submitted was identified as a fiberglass test coupon.

(P. O. #Credit Card).

WORK PERFORMED:

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

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

RESULTS:

The following determination was made based upon the above test:

BARCOL HARDNESS

	Hardness
Specimen 1	90

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

GHESQUIERE PLASTIC TESTING, INC.

M. W. Ghesquiere
President

MWG/dm

TOTAL 1 PAGES

GHESQUIERE PLASTIC TESTING, INC.

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

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

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

Attention: Mr. Don Anderson

WORK REQUESTED:

Perform Barcol Hardness test on sample submitted.

DESCRIPTION OF SAMPLE:

Sample submitted was identified as a fiberglass test coupon.

(P. O. #Credit Card).

WORK PERFORMED:

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

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

RESULTS:

The following determination was made based upon the above test:

BARCOL HARDNESS

	Hardness
Specimen 1	85

Specimen was returned to the client June 16, 2014.

GHESQUIERE PLASTIC TESTING, INC.

M. W. Ghesquiere
President

MWG/dm

October 2, 2014

▪ TEST REPORT ▪

PN 118325
PO Attn:John Frost

PLASTICS TESTING DEPARTMENT

Prepared For:

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

Prepared By: _____
Melissa Martin
Sr. Project Technician

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

October 2, 2014

John Frost
Environmental Geo-Technologies, LLC

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

RECEIVED: One small section identified as; Fiberglass Coupon.

BARCOL HARDNESS ASTM D 2583-13a

	Results
Barcol Hardness, Instant	97

Prepared By: _____
Melissa Martin
Sr. Project Technician

Approved By: _____
Scott W. Yates
Plastics Testing Assistant Manager

st

October 22, 2015

- TEST REPORT -

PN 125322
PO 00154

PLASTICS TESTING DEPARTMENT

Prepared For:

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

Prepared By: _____
Melissa Martin
Sr. Project Technician

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

October 22, 2015

John Frost
Environmental Geo-Technologies, LLC

SUBJECT: Barcol Hardness on one material.

RECEIVED: One small section identified as; Fiberglass Coupon.

BARCOL HARDNESS ASTM D 2583-13a
Instant Reading

	Results
Barcol Hardness, Instant	98

Prepared By: Melissa Martin
Sr. Project Technician

Approved By: Scott W. Yates
Plastics Testing Assistant Manager

tc

December 12, 2016

-TEST REPORT-

PN 132662
PO

PLASTICS TESTING DEPARTMENT

Prepared For:

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

Prepared By: _____
Melissa Martin
Senior Project Technician

Approved By: _____
Jim Drummond
Physical Testing, Manager

Rev 041916

December 12, 2016

John Frost
Environmental Geo-Technologies, LLC

SUBJECT: Barcol Hardness on one (1) material.

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

BARCOL HARDNESS ASTM D 2583-13a
Instant Reading

	RESULTS
Barcol Hardness, Instant	96

Prepared By: _____
Melissa Martin
Senior Project Technician

Approved By: _____
Scott Yates
Plastics Testing, Assistant Manager

wk

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

December 13, 2017

-TEST REPORT-

PN 139140

PO#

PLASTIC TESTING DEPARTMENT

Prepared For:

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

Prepared By: _____
Melissa Martin
Sr Project Technician

Approved By: _____
Jim Drummond
Rubber & Plastic Testing, Manager

Rev 041816

December 13, 2017

John Frost
Environmental Geo-Technologies, LLC

SUBJECT: Barcol Hardness on one material.

RECEIVED: One small section identified as; Fiberglass Coupon.

BARCOL HARDNESS ASTM D 2583-13a
Instant Reading

	Results
Barcol Hardness, Instant	96

Prepared By: Melissa Martin
Sr Project Technician

Approved By: Scott Yates
Plastics Testing, Assistant Manager

sc

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

CORROSION MONITORING PLAN
COUPON SUMMARY

Date	Hastelloy (C267)	Stainless Steel (316L)	Fiberglass (Redbox)	
12/19/2013	13.330 g	10.848 g	7.309 g	Initial Mass @ start up
2/21/2014	13.329 g	10.846 g	7.306 g	
3/10/2014	13.327 g	10.845 g	7.300 g	
4/18/2014	13.324 g	10.841 g	7.272 g	
5/30/2014	13.328 g	10.818 g	7.226 g	
6/30/2014	13.321 g	10.337 g	7.196 g	
7/11/2014	13.323 g	10.304 g	7.196 g	
8/12/2014	13.328 g	10.045 g	7.182 g	
9/17/2014	13.321 g	9.997 g	7.090 g	
10/30/2014	13.321 g	9.387 g	7.075 g	
11/21/2014	13.320 g	9.386 g	7.069 g	
12/19/2014	13.321 g	9.315 g	7.084 g	
1/12/2015	13.321 g	9.289 g	7.063 g	
2/23/2015	13.339 g	9.286 g	7.005 g	New hastelloy coupon
3/31/2015	13.339 g	9.286 g	7.005 g	
4/27/2015	13.335 g	9.130 g	6.852 g	
5/21/2015	13.336 g	9.124 g	6.809 g	
6/12/2015	13.334 g	9.126 g	6.819 g	
7/27/2015	13.337 g	9.127 g	6.818 g	
8/26/2015	13.337 g	9.022 g	6.780 g	
9/21/2015	13.336 g	8.987 g	6.792 g	
10/19/2015	13.335 g	8.985 g	6.797 g	
11/16/2015	13.334 g	8.982 g	6.788 g	
12/17/2015	13.334 g	8.933 g	6.791 g	
1/29/2016	13.334 g	8.931 g	6.788 g	
2/16/2016	13.332 g	8.799 g	6.757 g	
3/31/2016	13.339 g	9.286 g	7.005 g	
4/22/2016	13.333 g	8.590 g	6.744 g	
5/31/2015	13.334 g	6.084 g	6.784 g	
6/30/2016	13.328 g	10.942 g	6.793 g	New stainless steel coupon
8/3/2016	13.326 g	10.529 g	6.743 g	
8/29/2016	13.325 g	10.020 g	6.723 g	
10/27/2016	13.325 g	8.765 g	6.708 g	
11/29/2016	13.327 g	8.571 g	6.740 g	
12/12/2016	13.323 g	8.223 g	6.717 g	
1/3/2017	13.325 g	8.059 g	6.712 g	
2/28/2017	13.324 g	7.634 g	6.727 g	
3/24/2017	13.325 g	7.370 g	6.732 g	
4/28/2017	13.325 g	6.736 g	6.736 g	
5/11/2017	13.323 g	7.352 g	6.689 g	
6/12/2017	13.323 g	7.357 g	6.689 g	
7/5/2017	13.323 g	7.355 g	6.689 g	
8/30/2017	13.324 g	7.353 g	18.105 g	New Fiberglass coupon
9/28/2017	13.325 g	7.352 g	18.060 g	
10/11/2017	13.324 g	7.350 g	18.038 g	
11/16/2017	13.325 g	7.363 g	18.047 g	
12/12/2017	13.326 g	7.308 g	18.307 g	

CORROSION MONITORING PLAN
COUPON SUMMARY

Date	Hastelloy	Stainless Steel	Fiberglass	
1/29/2018	13.326 g	10.930 g	18.027 g	New stainless steel coupon
2/9/2018	13.325 g	10.932 g	18.044 g	
3/19/2018	13.325 g	10.926 g	18.030 g	

INJECTION
FINGERPRINTS

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date 12:30AM	04-11-2018
Receiving ID#	E041118C1
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	B
Sampled by	T E

COPY

LAB INFORMATION (All Waste Streams)		Other Information	
Compatible? (RT#)	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	7.6	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.00	TDS	4%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	61°F		
Conductivity	3mS		
% Solids	4%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	<1%		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date 12.19.09	04/09/10
Receiving ID#	I04091801
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	
Sampled by	

COPY

LAB INFORMATION All Waste Streams		Oily Waste Only	
Compatible? (RT#)	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	5.9	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.01	TDS	370
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	61°F		
Conductivity	1mS		
% Solids	3.7%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	<1%		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date 9:37a	03-27-18
Receiving ID#	I032718
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	PS
Sampled by	

COPY

LAB INFORMATION (Lower Strength)		Field Test	
Compatible? (RT#)	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140°F	Magnesium	
pH (S.U.)	0.3	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.10	TDS	16%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	61°F		
Conductivity	265mS		
% Solids	16%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	21%		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date 9:00 am	3-26-18
Receiving ID#	20B26K
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	PS
Sampled by	PS

COPY

LAB INFORMATION (Waste Shipments)		Field Results Only	
Compatible? (RT#)	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	0.3	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.14	TDS	139
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	63°F		
Conductivity	96 mS		
% Solids	13%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	<1%		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date 12:15 am	03/22/18
Receiving ID#	L 03 22 1801
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	PS
Sampled by	AV

COPY

LABINFORMATION ANALYSIS		Other Elements	
Compatible? (RT#)	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	0.2	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.11	TDS	16%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	63°F		
Conductivity	226 mS		
% Solids	16%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	<1%		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	3-23-18
Receiving ID#	I0323180l
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	PS
Sampled by	

COPY

LAB INFORMATION AT Waste Shipment		Comments	
Compatible? (RT#)	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	0.1	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.13	TDS	21%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	63°F		
Conductivity	135mS		
% Solids	21%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	<1%		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	03-20-18
Receiving ID#	I0320180I
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	PS
Sampled by	[signature]

COPY

LAB INFORMATION All Waste Streams		Oilfield Brines Only	
Compatible? (RT#)	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	2.9	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.10	TDS	22%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	62°F		
Conductivity	82mS		
% Solids	22%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	<1%		
Radiation Screen (as needed)			
Lab Signature	[signature]		

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date 1:00 pm	08/20/18
Receiving ID#	180820601
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	PS
Sampled by	PS

COPY

LAB INFORMATION (Waste Stream)		MISC. INFO.	
Compatible? (RT#)	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	1.2	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.12	TDS	22%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	61°F		
Conductivity	61mS		
% Solids	22%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	<1%		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date 3:00 am	03/19/18
Receiving ID#	Z0319/1801
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	PS
Sampled by	AW

COPY

LAB INFORMATION All Waste Shipments		[illegible]	
Compatible? (RT#)	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	0.6	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.18	TDS	18%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	60°F		
Conductivity	124mS		
% Solids	18%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	<1%		
Radiation Screen (as needed)			
Lab Signature	[signature]		

Revision 5.0
7/1/13

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	3:11 AM @ 03-16-18
Receiving ID#	F03161801
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	PS
Sampled by	TE

COPY

LAB INFORMATION All Waste Streams		[illegible] Brines Only	
Compatible? (RT#)	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	0.7	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.18	TDS	22%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	61°F		
Conductivity	59mS		
% Solids	22%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	<1%		
Radiation Screen (as needed)			
Lab Signature	[signature]		

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

COPY

RECEIVING INFORMATION [illegible]	
Date 03-12-18	10:15A
Receiving ID#	I03121802
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	PS
Sampled by	[signature]

LAB INFORMATION [illegible] All Waste Shipments		[illegible]	
Compatible? (RT#)	(Yes circled) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	1.1	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.18	TDS	29%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	65°F		
Conductivity	39mS		
% Solids	29%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	<1%		
Radiation Screen (as needed)			
Lab Signature	[signature]		

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

COPY

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12:10AM 03-12-18
Receiving ID#	I0312180-1
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	PS
Sampled by	TE

LAB INFORMATION All Waste Streams		[illegible]	
Compatible? (RT#)	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	1.8	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.04	TDS	16%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	64°F		
Conductivity	57mS		
% Solids	16%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	<1%		
Radiation Screen (as needed)			
Lab Signature	[signature]		

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date 9:30am	05/09/18
Receiving ID#	I0509 1802
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	PS
Sampled by	AW

COPY

LAB INFORMATION All Waste Streams		Other Tests	
Compatible? (RT#)	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>140° F	Magnesium	
pH (S.U.)	1.6	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.12	TDS	24%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	64°F		
Conductivity	54mS		
% Solids	26%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	2%		
Radiation Screen (as needed)			
Lab Signature	Pa[illegible]		

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date 4:50am	5 03/09/18
Receiving ID#	I03091801
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	PS
Sampled by	AW

COPY

LAB INFORMATION All Waste Shipments		Oilfield Waste Only	
Compatible? (RT#)	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	≥1400F	Magnesium	
pH (S.U.)	1.0	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.08	TDS	14%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	64°F		
Conductivity	155mS		
% Solids	14%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	<1%		
Radiation Screen (as needed)			
Lab Signature	[signature]		

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	3/8/18
Receiving ID#	I030818-02
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	PS
Sampled by	

COPY

LAB INFORMATION (Waste Streams)		Chemical Analysis (Soil)	
Compatible? (RT#)	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	0.9	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.08	TDS	18%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	64°F		
Conductivity	160mS		
% Solids	18%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	<1%		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date 9:57a	03-08-18
Receiving ID#	T030619001
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	PS
Sampled by	

COPY

LAB INFORMATION (Waste Stream)			
Compatible? (RT#)	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	2.6	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.06	TDS	10%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	63°F		
Conductivity	68mS		
% Solids	1%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	1%		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date 2:00pm	03/05/18
Receiving ID#	I 03 05 18 01
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time In	
Time out	
Received by	PS
Sampled by	AV

COPY

LAB INFORMATION (Lab to Complete)		OPTIONAL	
Compatible? (RT#)	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	5.5	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.16	TDS	29 %
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	64°F		
Conductivity	129mS		
% Solids	29 %		
Turbidity	Yes No		
Color (visual)			
TSS (%)	41 %		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date 8:42a	03.02.18
Receiving ID#	I03021802
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	PS
Sampled by	[signature]

COPY

LAB INFORMATION All Waste Shipments		Oilfield Sites Only	
Compatible? (RT#)	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	7140°F	Magnesium	
pH (S.U.)	4.8	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.20	TDS	33%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	64°F		
Conductivity	113 mS		
% Solids	33%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	<1%		
Radiation Screen (as needed)			
Lab Signature	[signature]		

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date 12:20	03/02/18
Receiving ID#	I03021801
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	PS
Sampled by	AW

LABORATORY INFORMATION			
Compatible? (RT#)	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	1.4	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.04	TDS	11%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	63°F		
Conductivity	14mS		
% Solids	11%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	<1%		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

COPY

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date 9140A	3-1-18
Receiving ID#	I03011801
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	[signature]
Sampled by	[signature]

LAB INFORMATION All Waste Streams [illegible] Sites Only			
Compatible? (RT#)	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	7140°F	Magnesium	
pH (S.U.)	1.4	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.04	TDS	7%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil In Sample	Yes No		
Temperature	64°F		
Conductivity	46mS		
% Solids	7%		
Turbidity	Yes No		
Color (visual)			
TSS (%)	<1%		
Radiation Screen (as needed)			
Lab Signature	[signature]		

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 # 01382

GENERATOR INFORMATION

[redacted]

WASTE INFORMATION

Name of Waste/Common Chemical Name:

Chrome Strip HCl

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

Metal Polishing, Buffing & Plating

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 D007 D008 _____ _____ _____ _____ _____ _____

PHYSICAL CHARACTERISTICS OF WASTE

Color:	Suspended Solids	Layers:	Specific Gravity:	
☐ White/Clear ☐ Black/Brown ☒ Other blue/green	☒ 0-1 % ☐ 3-5 % ☐ 1-3 % ☐ > 5%	☐ Multi-Layered ☐ Bi-Layered ☒ Single Phase	☐ <0.8 ☒ 1.0 – 1.2 ☐ 0.8 – 1.0 ☐ 1.3 – 1.4 Exact / Other 1.12	acceptable @ 03/18

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	
Water	98	70	%				%
Hydrochloric Acid	20	1	%				%
Salts	10	1	%				%
			%				%
			%				%

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	☒	____ ppm	Aromatic Amine	☒	____ ppm
Dioxins	☒	____ ppm	Pesticides	☒	____ ppm
Cyanides Reactive	☒	____ ppm	Rodenticides	☒	____ ppm
Cyanides Total	☒	____ ppm	Fungicides	☒	____ ppm
Sulfides Reactive	☒	____ ppm			
Sulfides Total	☒	____ ppm			

Arsenic (As)	D004	☒ < 5 ppm	____ ppm
Barium (Ba)	D005	☒ <100 ppm	____ ppm
Cadmium (Cd)	D006	☒ < 1 ppm	____ ppm
Chromium (Cr)	D007	☐ < 5 ppm	____ ppm
Lead (Pb)	D008	☐ < 5 ppm	____ ppm
Mercury (Hg)	D009	☒ < 0.2 ppm	____ ppm
Selenium (Se)	D010	☒ < 1 ppm	____ ppm
Silver (Ag)	D011	☒ < 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 RQ, UN3264, Waste Corrosive Liquid, acidic, inorganic, N.O.S. (Hydrochloric Acid), 8, I Hazard Class 8 UN/NA 3264

PG I ERG 154 Hazardous Constituents for "n.o.s." Hydrochloric Acid

4. Method of Shipment: ☒ Bulk Tanker ☒ Vac truck ☐ Rail Car ☒ Drums ☒ Totes
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. 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/or regulatory requirements.

[redacted]

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. 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.

[redacted]

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	3/15/18
Receiving ID#	
Manifest# Line:	
Land Ban Cert Included	Yes No
[redacted]	
Client	Chevron Shop HPD
Transporter	
Time In	
Time out	
Received by	PS
Sampled by	

Compatible? (RT#) Acids	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?	N/A	Calcium	
TOC (ppm)(CC Waste Only)?	N/A	Total Iron	
Flash Point (°F)	> 140 °F	Magnesium	
pH (S.U.)	0.1	Sodium Chloride	
Cyanides? (mg/L)	L30	Bicarbonate	
Sulfides? (ppm)	L200	Carbonate	
Specific Gravity	1.12	TDS	
Physical Description	liquid	Resistivity	
Stream Consistency	(Yes) No	Sulfate	
Oil in Sample	Yes (No)		
Temperature	60°F		
Conductivity	3 mS		
% Solids	80%		
Turbidity	(Yes) No		
Color (visual)	blue/green		
TSS (%)	L100		
Radiation Screen (as needed)	negative		
Lab Signature			

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

Generator Waste Profile

Profile # 01307

GENERATOR INFORMATION

[redacted]

WASTE INFORMATION

Name of Waste/Common Chemical Name:

Nitric Acid

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

Metal Polishing, Buffing & Plating

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	Suspended Solids	Layers:	Specific Gravity:	
☐ White/Clear	☒ 0-1 % ☐ 3-5 %	☐ Multi-Layered	☐ <0.8 ☒ 1.0 – 1.2	acceptable
☐ Black/Brown	☐ 1-3 % ☐ > 5%	☐ Bi-Layered	☐ 0.8 – 1.0 ☐ 1.3 – 1.4	D 032118
☒ Other green		☒ Single Phase	Exact / Other 1.20	

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	
Water	98	60	%				%
Nitric Acid	20	1	%				%
Solids	20	1	%				%
			%				%
			%				%

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	☐	____ppm	Aromatic Amine	☐	____ppm
Dioxins	☐	____ppm	Pesticides	☐	____ppm
Cyanides Reactive	☐	____ppm	Rodenticides	☐	____ppm
Cyanides Total	☐	____ppm	Fungicides	☐	____ppm
Sulfides Reactive	☐	____ppm			
Sulfides Total	☐	____ppm			

Arsenic (As)	D004	☐ < 5 ppm	____ppm		
Barium (Ba)	D005	☐ <100 ppm	____ppm		
Cadmium (Cd)	D006	☐ < 1 ppm	____ppm		
Chromium (Cr)	D007	☐ < 5 ppm	____ppm		
Lead (Pb)	D008	☐ < 5 ppm	____ppm		
Mercury (Hg)	D009	☐ < 0.2 ppm	____ppm		
Selenium (Se)	D010	☐ < 1 ppm	____ppm		
Silver (Ag)	D011	☐ < 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

Fuming with not more than 20% Nitric Acid, B, II

2. Reportable Quantity (RQ) in pounds _____

3. DOT Shipping Name RQ, UN2031, Waste Nitric Acid other than red Hazard Class 8 UN/NA 2031

PG II ERG 157 Hazardous Constituents for "n.o.s." _____

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

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. 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/or regulatory requirements.

[redacted]

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. 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.

[redacted]

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	3/15/18
Receiving ID#	
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	[redacted]
Client	Nitric Acid
Transporter	
Time In	
Time out	
Received by	PS
Sampled by	

LAB INTERPRETATION			
Compatible? (RT#) Acids	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?	N/A	Calcium	
TOC (ppm)(CC Waste Only)?	N/A	Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	0.1	Sodium Chloride	
Cyanides? (mg/L)	<30	Bicarbonate	
Sulfides? (ppm)	<200	Carbonate	
Specific Gravity	1.20	TDS	
Physical Description	l.q.v.d	Resistivity	
Stream Consistency	(Yes) No	Sulfate	
Oil in Sample	Yes (No)		
Temperature	60°F		
Conductivity	366mS		
% Solids	10%		
Turbidity	Yes (No)		
Color (visual)	green		
TSS (%)	<10%		
Radiation Screen (as needed)	negative		
Lab Signature	[signature]		

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

Generator Waste Profile
Profile # 01306

[redacted]

WASTE INFORMATION

Name of Waste/Common Chemical Name:

Nickel Strip

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

Metal Polishing, Buffing & Plating.

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:	Suspended Solids	Layers:	Specific Gravity:	
☐ White/Clear	☒ 0-1 % ☐ 3-5 %	☐ Multi-Layered	☐ <0.8 ☒ 1.0 – 1.2	Acceptable
☒ Black/Brown ~~DARK~~	☐ 1-3 % ☐ > 5%	☐ Bi-Layered	☐ 0.8 – 1.0 ☐ 1.3 – 1.4	032418
☐ Other ____		☒ Single Phase	Exact / Other 1.16	

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)

TOTAL COMPOSITION OF WASTE – *MUST BE EQUAL TO OR GREATER THAN 100% (LIST EACH CONSTITUENT >/= 0.1%)*

CONSTITUENT	MAX	MIN		CONSTITUENT	MAX	MIN	
Water	98	50	%				%
Sodium Hydroxide	20	1	%				%
Solids	30	1	%				%
			%				%
			%				%

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	☒	____ppm	Aromatic Amine	☒	____ppm
Dioxins	☒	____ppm	Pesticides	☒	____ppm
Cyanides Reactive	☒	____ppm	Rodenticides	☒	____ppm
Cyanides Total	☒	____ppm	Fungicides	☒	____ppm
Sulfides Reactive	☒	____ppm			
Sulfides Total	☒	____ppm			

Arsenic (As)	D004	☒ < 5 ppm	____ ppm	
Barium (Ba)	D005	☒ <100 ppm	____ ppm	
Cadmium (Cd)	D006	☒ < 1 ppm	____ ppm	
Chromium (Cr)	D007	☒ < 5 ppm	____ ppm	
Lead (Pb)	D008	☒ < 5 ppm	____ ppm	
Mercury (Hg)	D009	☒ <0.2 ppm	____ ppm	
Selenium (Se)	D010	☒ < 1 ppm	____ ppm	
Silver (Ag)	D011	☒ < 5 ppm	____ ppm	

TCLP Organics D012 – D049 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 RQ, UN3266, Waste Corrosive Liquid, basic, Inorganic, N.O.S. (Sodium hydroxide), 8, II Hazard Class _____ UN/NA 3266
PG _____ ERG 154 Hazardous Constituents for "n.o.s." Sodium hydroxide
4. Method of Shipment: ☒Bulk Tanker ☒Vac truck ☐Rail Car ☒Drums ☒Totes
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. 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/or regulatory requirements.

[redacted]

GENERATOR'S CHAIN OF CUSTODY RECORD INSTRUCTIONS:

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[redacted]

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	3/15/18
Receiving ID#	
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	[redacted]
Client	Nickel Strip
Transporter	
Time In	
Time out	
Received by	PS
Sampled by	

LAB INFORMATION			
Compatible? (RT#) bases	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?	N/A	Calcium	
TOC (ppm)(CC Waste Only)?	N/A	Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	11.6	Sodium Chloride	
Cyanides? (mg/L)	<30	Bicarbonate	
Sulfides? (ppm)	<200	Carbonate	
Specific Gravity	1.16	TDS	
Physical Description	liquid	Resistivity	
Stream Consistency	(Yes) No	Sulfate	
Oil in Sample	Yes (No)		
Temperature	60°F		
Conductivity	44mS		
% Solids	29%		
Turbidity	(Yes) No		
Color (visual)	Iodine		
TSS (%)	<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 # 01307

[redacted]

WASTE INFORMATION

Name of Waste/Common Chemical Name:

Alkaline Soak Cleaner

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

Metal Polishing, Buffing, & Plating

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 D007

PHYSICAL CHARACTERISTICS OF WASTE

Color:	Suspended Solids	Layers:	Specific Gravity:	accepted
☐ White/Clear	☒ 0-1 % ☐ 3-5 %	☐ Multi-Layered	☐ <0.8 ☒ 1.0 – 1.2	
☐ Black/Brown	☐ 1-3 % ☐ > 5%	☒ Bi-Layered	☐ 0.8 – 1.0 ☐ 1.3 – 1.4	
☒ Other beige		☐ Single Phase	Exact / Other 1.06	032118

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	
Water	98	60	%				%
Sodium Hydroxide	20	1	%				%
Solids	20	1	%				%
			%				%
			%				%

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	☐	____ ppm	Aromatic Amine	☐	____ ppm
Dioxins	☐	____ ppm	Pesticides	☐	____ ppm
Cyanides Reactive	☐	____ ppm	Rodenticides	☐	____ ppm
Cyanides Total	☐	____ ppm	Fungicides	☐	____ ppm
Sulfides Reactive	☐	____ ppm			
Sulfides Total	☐	____ ppm			

		Not Present	Concentration	
Arsenic (As)	D004	☐	< 5 ppm	____ ppm
Barium (Ba)	D005	☐	<100 ppm	____ ppm
Cadmium (Cd)	D006	☐	< 1 ppm	____ ppm
Chromium (Cr)	D007	☐	< 5 ppm	____ ppm
Lead (Pb)	D008	☐	< 5 ppm	____ ppm
Mercury (Hg)	D009	☐	<0.2 ppm	____ ppm
Selenium (Se)	D010	☐	< 1 ppm	____ ppm
Silver (Ag)	D011	☐	< 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 & 179 Subpart D)? ☒ Yes ☐ No (inorganic, N.O.S. (Sodium hydroxide), 8, II)
2. Reportable Quantity (RQ) in pounds _____
3. DOT Shipping Name RQ, UN3266, Waste Corrosive Liquid, basic, Hazard Class 8 UN/NA 3266
   PG II ERG 154 Hazardous Constituents for "n.o.s." Sodium Hydroxide
4. Method of Shipment: ☒ Bulk Tanker ☒ Vac truck ☐ Rail Car ☒ Drums ☒ Totes
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. 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/or regulatory requirements.

[redacted]

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. 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.

[redacted]

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	3/15/18
Receiving ID#	
Manifest# Line:	
Land Ban Cert Included	Yes No
EQT Approval#	[redacted]
Client	Alliance Soil
Transporter	Cleaner
Time In	
Time out	
Received by	PS
Sampled by	

Compatible? (RT#) bases	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?	N/A	Calcium	
TOC (ppm)(CC Waste Only)?	N/A	Total Iron	
Flash-Point (°F)	≥140°F	Magnesium	
pH (S.U.)	13.0	Sodium Chloride	
Cyanides? (mg/L)	<30	Bicarbonate	
Sulfides? (ppm)	<200	Carbonate	
Specific Gravity	1.06	TDS	
Physical Description	liquid	Resistivity	
Stream Consistency	Yes (No)	Sulfate	
Oil In Sample	Yes (No)		
Temperature	60°F		
Conductivity	62 mS		
% Solids	16%		
Turbidity	(Yes) No		
Color (visual)	beige		
TSS (%)	2%		
Radiation Screen (as needed)	negative		
Lab Signature	[signature]		

Notes: Two layers. Top appears to be emulsion.

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

Generator Waste Profile

Profile # 21329

[redacted]

WASTE INFORMATION

Name of Waste/Common Chemical Name:

Chromic Acid Plating Bath

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

Metal Polishing, Buffing & Plating

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 D007 D008 _____ _____ _____ _____ _____

PHYSICAL CHARACTERISTICS OF WASTE

Color:	Suspended Solids	Layers:	Specific Gravity:	
☐ White/Clear	☒ 0-1 % ☐ 3-5 %	☐ Multi-Layered	☐ <0.8 ☒ 1.0 – 1.2	acceptable
☒ Black/Brown<DARK	☐ 1-3 % ☐ > 5%	☐ Bi-Layered	☐ 0.8 – 1.0 ☐ 1.3 – 1.4	
☐ Other _____		☒ Single Phase	Exact / Other 1.22	03/19

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	
Water	98	50	%				%
Chromic Acid	20	1	%				%
Solids	30	1	%				%
			%				%
			%				%

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	☐	____ ppm	Aromatic Amine	☐	____ ppm
Dioxins	☐	____ ppm	Pesticides	☐	____ ppm
Cyanides Reactive	☐	____ ppm	Rodenticides	☐	____ ppm
Cyanides Total	☐	____ ppm	Fungicides	☐	____ ppm
Sulfides Reactive	☐	____ ppm			
Sulfides Total	☐	____ ppm			

Arsenic (As)	D004	☐ < 5 ppm	____ ppm
Barium (Ba)	D005	☐ <100 ppm	____ ppm
Cadmium (Cd)	D006	☐ < 1 ppm	____ ppm
Chromium (Cr)	D007	☐ < 5 ppm	____ ppm
Lead (Pb)	D008	☐ < 5 ppm	____ ppm
Mercury (Hg)	D009	☐ <0.2 ppm	____ ppm
Selenium (Se)	D010	☐ < 1 ppm	____ ppm
Silver (Ag)	D011	☐ < 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 Cardinogens ☐ 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 RQ, UN1755, Waste Chromic Acid Solution, 8 Hazard Class 8 UN# 1755
PG II ERG 154 Hazardous Constituents for "n.o.s." _____
4. Method of Shipment: ☒ Bulk Tanker ☒ Vac truck ☐ Rail Car ☒ Drums ☒ Totes
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. 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/or regulatory requirements.

[redacted]

GENERATOR'S CHAIN OF CUSTODY RECORD INSTRUCTIONS:

Please collect a representative 1-quart sample o the waste described in the above referenced GENERATORS 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.

[redacted]

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	3/15/18
Receiving ID#	
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
[redacted]	
Client	Chromic Acid
Transporter	Plating Baths
Time In	
Time out	
Received by	
Sampled by	

Compatible? (RT#) acids	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?	N/A	Calcium	
TOC (ppm)(CC Waste Only)?	N/A	Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	0.7	Sodium Chloride	
Cyanides? (mg/L)	<30	Bicarbonate	
Sulfides? (ppm)	<200	Carbonate	
Specific Gravity	1.22	TDS	
Physical Description	liquid	Resistivity	
Stream Consistency	(Yes) No	Sulfate	
Oil in Sample	Yes (No)		
Temperature	60°F		
Conductivity	320 mS		
% Solids	27%		
Turbidity	(Yes) No		
Color (visual)	Iodine		
TSS (%)	<1%		
Radiation Screen (as needed)	negative		
Lab Signature			

Envirite of Illinois, Inc.
Waste Material Profile Sheet

0313

A. Profile Information

Common Description: EP Rinse/Water

B. Customer Information

[redacted]

C. DOT Information

DOT Name: RQ Waste Corrosive Liquid, Acidic, Inorganic, N.O.S. (Phosphoric, Sulfuric Acid)

Container Type: TT Container Size: 3000 Gallon HC: 8 UN/NA: 3264 PG: II

D. Biennial/Annual Reporting Information

Source Code: _____ Form Code: _____

E. Physical Properties

Color: Green Odor: Mild % Oil/Grease: 0

FLASH POINT	FREE LIQUIDS	PHASES
☐ < 100 F	☒ Yes	☒ Single
☐ 100 – 139 F	☐ No	☐ Double
☐ > 140 F		☐ Multi
☒ > 200 F		

PHYSICAL STATE	pH
☐ Solid	☒ < 2
☐ Powder	☐ > 2 – < 4.9
☐ Sludge	☐ > 5 – < 9.9
☒ Liquid	☐ > 10 – < 12.4
☐ Liquid / Solid	☐ > 12.5

acceptable
03/28/08

Shaded area for Envirite of Illinois, Inc. use only

Profile 17783 Date Received 10/28/08 Date Approved _____

File Ref. No. New ☒ Recertification ☐ JW

Envirite of Illinois, Inc.

Waste Material Profile Sheet

F. TCLP

TCLP		Actual Value	Reg. Level	UM	TCLP		Actual Value	Reg. Level	UM
D004	Arsenic		5	mg/l	D024	m-Cresol		200	mg/l
D005	Barium		100	mg/l	D025	p-Cresol		200	mg/l
D006	Cadmium		1	mg/l	D026	Total Cresols		200	mg/l
D007	Chromium		5	mg/l	D027	1,4-Dichlorobenzene		7.5	mg/l
D008	Lead		5	mg/l	D028	1,2-Dichloroethane		0.5	mg/l
D009	Mercury		0.2	mg/l	D029	1,1-Dichloroethylene		0.7	mg/l
D010	Selenium		1	mg/l	D030	2,4-Dinitrotoluene		0.13	mg/l
D011	Silver		5	mg/l	D031	Heptachlor		0.008	mg/l
D012	Endrin		0.02	mg/l	D032	Hexachlorobenzene		0.13	mg/l
D013	Lindane		0.4	mg/l	D033	Hexachlorobutadiene		0.5	mg/l
D014	Methoxychlor		10	mg/l	D034	Hexachloroethane		3.0	mg/l
D015	Toxaphene		0.5	mg/l	D035	Methyl Ethyl Ketone		200	mg/l
D016	2,4-D		10	mg/l	D036	Nitrobenzene		2	mg/l
D017	2,4,5-TP (Silvex)		1	mg/l	D037	Pentachlorophenol		100	mg/l
D018	Benzene		0.5	mg/l	D038	Pyridine		5	mg/l
D019	Carbon tetrachloride		0.5	mg/l	D039	Tetrachloroethylene		0.7	mg/l
D020	Chlordane		0.03	mg/l	D040	Trichloroethylene		0.5	mg/l
D021	Chlorobenzene		100	mg/l	D041	2,4,5-Trichlorophenol		400	mg/l
D022	Chloroform		6.0	mg/l	D042	2,4,6-Trichlorophenol		2	mg/l
D023	o-Cresol		200	mg/l	D043	Vinyl chloride		0.2	mg/l

Please complete Attachment J

G. Underlying Hazardous Constituents (write in "None" for no UHCs or "N/A" if not applicable)

Chemical	Value	UM
Nickel	present	%
	1	%
		%
		%

H. Chemical Composition

Chemical

Other	Low	High	UM
Water	95	99	%
Phosphoric Acid	1	3	%
Sulfuric Acid	1	2	%

Envirite of Illinois, Inc.

Waste Material Profile Sheet

Please check each of the following 3 questions with either yes or no. Do not leave blank.		
Is this a RCRA Hazardous waste per 40 CFR 261 or equivalent State Regulation?	☒ Yes	☐ No
Is this a Listed Hazardous waste per 40 CFR 261 or equivalent State Regulation?	☐ Yes	☒ No
Is this a Characteristic Hazardous waste per 40 CFR 261 or equivalent State Regulation?	☒ Yes	☐ No

I. Waste Codes D002,D006,D007

J. Generation Information

Generating Process: Rinse Water from the Electropolishing of Stainless steel

Generation Rate: 3000 (Quantity) Gallons (U/M) ☐ 1x ☒ quarterly ☐ weekly ☐ semi-annually ☐ monthly ☐ annually

K. Waste Characteristics

Insecticides	☐	Dioxin	☐	PCBs	☐
Shock Sensitive	☐	Pyrophoric	☐	RX Cyanide >250ppm	☐
Pesticides	☐	Household Waste	☐	RX Sulfide >500ppm	☐
Herbicides	☐	Crystalline Free Silica	☐	(Unless Checked) None Apply	☒
Radioactive	☐	Explosive	☐	Other (specify)	☐
Medical Waste	☐	Asbestos	☐		
Oxidizers	☐	Carcinogen	☐		

Additional Information:

L. Regulatory Characterization

☒	WASTEWATER PER 40 CFR 268	☐	BY PRODUCT
☐	NON-WASTEWATER PER 40 CFR 268	☐	RX WITH LIME TO CREATE FLAM. GAS
☐	UNIVERSAL WASTE	☒	DOES NOT RX VIOLENTLY WITH LIME
☐	CHARACTERISTIC SLUDGE	☐	CONTAINS VOCS OVER 500 PPM
☐	VIRGIN UNUSED PRODUCT	☒	DOES NOT CONTAIN VOCS OVER 500 PPM
☒	SPENT MATERIAL	☐	CONTAINS METALLIC FINES/POWDERS
☐	WASTE HAS BEEN TREATED	☐	POLLUTION CONTROL WASTE (IL)
☐	CYANIDE PLATING ON SITE	☒	INDUSTRIAL PROCESS WASTE (IL)
☐	SUBSTITUTE COMMERCIAL PRODUCT		

(Mark ALL conditions that apply; a blank response confirms the condition(s) do not apply to this waste stream.)

This form must be signed by a person authorized to represent the generator. If the individual signing the Waste Profile is a broker or other agent not employed by the generator of the waste, the generator must provide written notification (on generator letterhead) documenting the authority granted that individual.

I authorize Envirite to make corrections to this waste profile. I understand that I will be required to confirm any changes in writing.

☒ Yes ☐ No

I hereby avow that any pertinent information that is known by the generator concerning possible hazards has been disclosed. I certify that, to the best of my knowledge, all statements and attach[illegible] correct and accurate

[redacted]

Envirite of Illinois, Inc.

Waste Material Profile Sheet

Date of Sampling: 10-24-08 Time of Sampling: 2:00 ☐ AM ☑ PM

[redacted]

Sampler Name: [redacted]

[redacted]

Description of Sample: None

Attachment J

This certification statement must be provided by the generator of non-commingled hazardous waste unless analysis is provided for each parameter identified below.

[redacted] Certification Form

Profile #: _____

Illinois ID #: _____

Generator Waste Name: EP Rinsewater

Process Which Generated Waste: Electropolishing Stainless Steel

I certify that the following constituents (checked as below) are not present in my waste stream above the regulatory level identified in 35 IAC 728, Appendix E

Characteristics of Hazardous Waste: Indicate if this waste contains any characteristics above regulatory level.

	Constituent	Regulatory Threshold Level, ppm	Results of the Profile, ppm		Constituent	Regulatory Threshold Level, ppm	Results of the Profile, ppm
D004	Arsenic	5.0	no	D025	p-Cresol	200.0	no
D005	Barium	100.0	no	D026	Cresol	200.0	no
D006	Cadmium	1.0	0.04	D027	1, 4-Dichlorobenzene	7.5	no
D007	Chromium	5.0	1200	D028	1, 2-Dichloroethane	0.5	no
D008	Lead	5.0	no	D029	1, 1-Dichloroethylene	0.7	no
D009	Mercury	0.2	no	D030	2, 4-dinitrotoluene	0.13	no
D010	Selenium	1.0	no	D031	Heptachlor (and its epoxide)	0.008	no
D011	Silver	5.0	no	D032	Hexachlorobenzene	0.13	no
D012	Endrin	0.02	no	D033	Hexachlorobutadiene	0.5	no
D013	Lindane	0.4	no	D034	Hexachloroethane	3.0	no
D014	Methoxychlor	10.0	no	D035	Methyl ethyl ketone	200.0	no
D015	Toxaphene	0.5	no	D036	Nitrobenzene	2.0	no
D016	2,4-D (2,4-Dichloro phenoxyacetic acid)	10.0	no	D037	Pentachlorophenol	100.0	no
D017	2, 4, 5-Tp Silvex	1.0	no	D038	Pyridine	5.0	no
D018	Benzene	.05	no	D039	Tetrachloroethylene	0.7	no
D019	Carbon Tetrachloride	0.5	no	D040	Trichloroethylene	0.5	no
D020	Chlordane	0.03	no	D041	2, 4, 5-Trichlorophenol	400.0	no
D021	Chlorobenzene	100.0	no	D042	2, 4, 6-Trichlorophenol	2.0	no
D022	Chloroform	6.0	no	D043	Vinyl Chloride	0.2	no
D023	o-Cresol	200.0	no				
D024	m-Cresol	200.0	no				

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 to the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is true, accurate, and complete. I have used intimate knowledge of my process which generates the waste and adequate Material Safety Data Sheets as defined below, to determine [redacted] in accordance with 35 IAC 722.111(d).

[redacted] facility.

Definitions

1. Manufacturing Process – for the purpose of these analyses requirements, a manufacturing process is limited to a controlled manufacturing operation which combines specific ingredients and follows quality control procedures to obtain a specific product.
2. Adequate Material Safety Data Sheets (MSDS) – a material safety data sheet which identifies the exact percentage of each constituent identified in 35 IAC 721, Appendix H in the material, compound, or product.
3. Intimate generator knowledge – the generator's ability to use experience, knowledge of his process and adequate MSDS to determine the exact percent of each hazardous constituent (as identified in 35 IAC 721 Appendix H) present in the waste.
4. Lab Pack – small containers packed in absorbent material inside an overpack as defined in 35 IAC 724.416.

LABORATORY DETAIL REPORT

[redacted]

KAR Project No. : 083269
Date Reported : 08/25/08

Project
Desc. : *Analysis of two samples.*

Sample ID : *"Wastewater"*
Sampled By :
Sample Date : *08/11/08*
Sample Time : *0900*

Date Received : *08/11/08*
Sample Type : *aqueous*
KAR Sample No. : *083269-01*

Test	Result	Units of Measure	Method	Analyzed	Analyst	Comments
Prep, metals	Completed		EPA 30xx,200.x	08/19/08	PML	
Cadmium, total	696	ug/L	EPA 200.7	08/21/08	DBL	
Chromium, total	295,000	ug/L	EPA 200.7	08/21/08	DBL	
Copper, total	285,000	ug/L	EPA 200.7	08/21/08	DBL	
Lead, total, by ICP	288	ug/L	EPA 200.7	08/21/08	DBL	
Nickel, total	114,000	ug/L	EPA 200.7	08/21/08	DBL	
Zinc, total	2130	ug/L	EPA 200.7	08/21/08	DBL	
Cyanide, total	32	ug/L	SM 4500-CN C,E	08/21/08	EKS	Matrix: sample preservation result is approximate. Residual chlorine in sample required prior to analysis
Gravimetric TPH (SGT-HEM)	<5	mg/L	EPA 1664	08/20/08	LPV	
PH	<1	S.U.	SM 4500-H B	08/11/08	ALD	
MONR Scan 2	See below		EPA 624	08/20/08	JAR	
Prep, VOA	Completed		EPA 624	08/20/08	JAR	
Benzene	<0.001	mg/L	EPA 624	08/20/08	JAR	
Ethylbenzene	<0.001	mg/L	EPA 624	08/20/08	JAR	
M-and/or p-xylene	<0.002	mg/L	EPA 624	08/20/08	JAR	
O-Xylene	0.001	mg/L	EPA 624	08/20/08	JAR	
Toluene	<0.001	mg/L	EPA 624	08/20/08	JAR	

LABORATORY DETAIL REPORT

[redacted]

KAR Project No. : 084087
Date Reported : 10/08/08

Project
Desc. : Analysis of one liquid sample.

Sample ID : TCLP Leachate of EP Solution, formerly KAR 083269-02
Sampled By :
Sample Date :
Sample Time :

Date Received : 09/11/08
Sample Type : TCLP
KAR Sample No. : 084087-017

Test	Result	Units of Measure	Method	Analyzed	Analyst	Comments
TC Metals	Completed		EPA 6010B	10/03/08	DBL	
Prep, Hg	Completed		EPA 7470A	10/02/08	DBL	
Prep, metals	Completed		EPA 3010A,200.X	10/02/08	PML	
Arsenic, total, by ICP	<20	mg/L	EPA 6010B	10/03/08	DBL	TC regulatory limit is 5.0 mg/L.
Barium, total	<2	mg/L	EPA 6010B	10/03/08	DBL	TC regulatory limit is 100 mg/L.
Cadmium, total	5.04	mg/L	EPA 6010B	10/03/08	DBL	EXCEEDS the Toxicity Characteristic limit of 1.0 mg/L.
Chromium, total	11,200	mg/L	EPA 6010B	10/03/08	DBL	EXCEEDS the Toxicity Characteristic limit of 5.0 mg/L.
Lead, total, by ICP	<5	mg/L	EPA 6010B	10/03/08	DBL	TC regulatory limit is 5.0 mg/L.
Mercury, total	<0.05	mg/L	EPA 7470A	10/02/08	DBL	TC regulatory limit is 0.2 mg/L.
Selenium, total, by ICP	<10	mg/L	EPA 6010B	10/03/08	DBL	TC regulatory limit is 1.0 mg/L.
Silver, total	<0.5	mg/L	EPA 6010B	10/03/08	DBL	TC regulatory limit is 5.0 mg/L.

LABORATORY DETAIL REPORT

[redacted]

KAR Project No. : 083269
Date Reported : 08/25/08

Project
Desc. : *Analysis of two samples.*

Sample ID : *"Wastewater"*
Sampled By :
Sample Date : *08/11/08*
Sample Time : *0900*

Date Received : *08/11/08*
Sample Type : *aqueous*
KAR Sample No. : *083269-01*

Test	Result	Units of Measure	Method	Analyzed	Analyst	Comments
Prep, metals	Completed		EPA 30xx,200.x	08/13/08	FML	
Cadmium, total	599	ug/L	EPA 200.7	08/21/08	DBL	
Chromium, total	295,000	ug/L	EPA 200.7	08/21/08	DBL	
Copper, total	285,000	ug/L	EPA 200.7	08/21/08	DBL	
Lead, total, by ICP	266	ug/L	EPA 200.7	08/21/08	DBL	
Nickel, total	114,000	ug/L	EPA 200.7	08/21/08	DBL	
Zinc, total	2130	ug/L	EPA 200.7	08/21/08	DBL	
Cyanide, total	32	ug/L	SM 4500-CN C,E	08/21/08	EKS	Loss on sample preservation; result is approximate. Residual chlorine in sample removed prior to analysis
Gravimetric TPH (SGT-HEM)	<5	mg/L	EPA 1664	08/20/08	LPV	
PH	<1	S.U.	SM 4500-H B	08/11/08	ALD	
MDNR Scan 2	See below		EPA 624	08/20/08	JAR	
Prep, VOA	Completed		EPA 624	08/20/08	JAR	
Benzene	<0.001	mg/L	EPA 624	08/20/08	JAR	
Ethylbenzene	<0.001	mg/L	EPA 624	08/20/08	JAR	
M-and/or p-xylene	<0.002	mg/L	EPA 624	08/20/08	JAR	
O-Xylene	0.001	mg/L	EPA 624	08/20/08	JAR	
Toluene	<0.001	mg/L	EPA 624	08/20/08	JAR	

LABORATORY DETAIL REPORT

[redacted]

KAR Project No. : 084087
Date Reported : 10/08/08

Project
Desc. : *Analysis of one liquid sample.*

Sample ID : *TCLP Leachate of EP Solution, formerly KAR 083269-02*
Sampled By :
Sample Date :
Sample Time :

Date Received : 09/11/08
Sample Type : TCLP
KAR Sample No. : 084087-017

Test	Result	Units of Measure	Method	Analyzed	Analyst	Comments
TC Metals	Completed		EPA 6010B	10/03/08	DBL	
Prep, Hg	Completed		EPA 7470A	10/02/08	DBL	
Prep, metals	Completed		EPA 3010A,200.X	10/02/08	PML	
Arsenic, total, by ICP	<20	mg/L	EPA 6010B	10/03/08	DBL	TC regulatory limit is 5.0 mg/L.
Barium, total	<2	mg/L	EPA 6010B	10/03/08	DBL	TC regulatory limit is 100 mg/L.
Cadmium, total	8.04	mg/L	EPA 6010B	10/03/08	DBL	EXCEEDS the Toxicity Characteristic limit of 1.0 mg/L.
Chromium, total	11,200	mg/L	EPA 6010B	10/03/08	DBL	EXCEEDS the Toxicity Characteristic limit of 5.0 mg/L.
Lead, total, by ICP	<5	mg/L	EPA 6010B	10/03/08	DBL	TC regulatory limit is 5.0 mg/L.
Mercury, total	<0.05	mg/L	EPA 7470A	10/02/08	DBL	TC regulatory limit is 0.2 mg/L.
Selenium, total, by ICP	<10	mg/L	EPA 6010B	10/03/08	DBL	TC regulatory limit is 1.0 mg/L.
Silver, total	<0.5	mg/L	EPA 6010B	10/03/08	DBL	TC regulatory limit is 5.0 mg/L.

01314

NALCO

SAFETY DATA SHEET

PRODUCT

CAT-FLOC 71264

EMERGENCY TELEPHONE NUMBER(S)
(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : **CAT-FLOC 71264**

APPLICATION : COAGULANT AID

COMPANY IDENTIFICATION : Nalco Company
1601 W. Diehl Road
Naperville, Illinois
60563-1198

EMERGENCY TELEPHONE NUMBER(S) : (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING
HEALTH : 3 / 3 FLAMMABILITY : 1 / 1 INSTABILITY : 0 / 0 OTHER :
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme * = Chronic Health Hazard

2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical substance(s) as hazardous. Consult Section 15 for the nature of the hazard(s).

Hazardous Substance(s)	CAS NO	% (w/w)
Ferric Chloride	7705-08-0	30.0 - 60.0

3. HAZARDS IDENTIFICATION

****EMERGENCY OVERVIEW****

DANGER
Corrosive. May cause tissue damage. Toxic to aquatic organisms.
Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Keep container tightly closed and in a well-ventilated place. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water.
Wear a face shield. Wear chemical resistant apron, chemical splash goggles, impervious gloves and boots.
Not flammable or combustible. May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. May evolve ammonia under fire conditions.

PRIMARY ROUTES OF EXPOSURE :
Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :
Corrosive. Will cause eye burns and permanent tissue damage.

SKIN CONTACT :
May cause severe irritation or tissue damage depending on the length of exposure and the type of first aid administered.

INGESTION :
Not a likely route of exposure. Corrosive; causes chemical burns to the mouth, throat and stomach.

INHALATION :
Not a likely route of exposure. Irritating, in high concentrations, to the eyes, nose, throat and lungs.

SYMPTOMS OF EXPOSURE :
Acute :
A review of available data does not identify any symptoms from exposure not previously mentioned.
Chronic :
A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS :
A review of available data does not identify any worsening of existing conditions.

4. FIRST AID MEASURES

EYE CONTACT :
PROMPT ACTION IS ESSENTIAL IN CASE OF CONTACT. Immediately flush eye with water for at least 15 minutes while holding eyelids open. Get immediate medical attention.

SKIN CONTACT :
Immediately flush with plenty of water for at least 15 minutes. For a large splash, flood body under a shower. Remove contaminated clothing. Wash off affected area immediately with plenty of water. Get immediate medical attention. Contaminated clothing, shoes, and leather goods must be discarded or cleaned before re-use.

INGESTION :
DO NOT INDUCE VOMITING. If conscious, washout mouth and give water to drink. Get immediate medical attention.

INHALATION :
Remove to fresh air, treat symptomatically. Get medical attention.

NOTE TO PHYSICIAN :
Probable mucosal damage may contraindicate the use of gastric lavage. Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

FLASH POINT : None

EXTINGUISHING MEDIA :
This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable. Use extinguishing media appropriate for surrounding fire. Water mist may be used to cool closed containers.

FIRE AND EXPLOSION HAZARD :
Not flammable or combustible. May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. May evolve ammonia under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :
In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :
Restrict access to area as appropriate until clean-up operations are complete. Ensure clean-up is conducted by trained personnel only. Ventilate spill area if possible. Do not touch spilled material. Stop or reduce any leaks if it is safe to do so. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Notify appropriate government, occupational health and safety and environmental authorities.

METHODS FOR CLEANING UP :
SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. LARGE SPILLS: Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Wash site of spillage thoroughly with water. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :
This product is toxic to fish and other water organisms. Do not discharge directly into lakes, ponds, streams, waterways or public water supplies.

7. HANDLING AND STORAGE

HANDLING :
Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Avoid generating aerosols and mists. Keep the containers closed when not in use. Have emergency equipment (for fires, spills, leaks, etc.) readily available.

STORAGE CONDITIONS :
Store the containers tightly closed. Store separately from oxidizers. Store in suitable labeled containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :
Exposure guidelines have not been established for this product. Available exposure limits for the substance(s) are shown below.

Substance(s)	Basis	ppm	mg/m3	Non-Standard Unit

* A skin notation refers to the potential significant contribution to overall exposure by the cutaneous route, including mucous membranes and the eyes.

ENGINEERING MEASURES :
General ventilation is recommended. Use local exhaust ventilation if necessary to control airborne mist and vapor.

RESPIRATORY PROTECTION :
If significant mists, vapors or aerosols are generated an approved respirator is recommended. A suitable filter material depends on the amount and type of chemicals being handled. Consider the use of filter type: Multi-contaminant cartridge. with a Particulate pre-filter. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

HAND PROTECTION :
When handling this product, the use of chemical gauntlets is recommended. The choice of work glove depends on work conditions and what chemicals are handled, but we have positive experience under light handling conditions using gloves made from Neoprene Nitrile Natural rubber or PVC Gloves should be replaced immediately if signs of degradation are observed. Breakthrough time not determined as preparation, consult PPE manufacturers.

SKIN PROTECTION :
Wear chemical resistant apron, chemical splash goggles, impervious gloves and boots. A full slicker suit is recommended if gross exposure is possible.

EYE PROTECTION :
Wear a face shield with chemical splash goggles.

HYGIENE RECOMMENDATIONS :
Eye wash station and safety shower are necessary. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
APPEARANCE	Dark brown Opaque
ODOR	Slight

SPECIFIC GRAVITY	1.37 - 1.41
DENSITY	11.4 - 11.7 lb/gal
SOLUBILITY IN WATER	Complete
pH (100 %)	1.2
BOILING POINT	223 °F / 106 °C

VOC CONTENT 0.00 lb/gal

Note: These physical properties are typical values for this product and are subject to change.

10. STABILITY AND REACTIVITY

STABILITY :
Stable under normal conditions.

HAZARDOUS POLYMERIZATION :
Hazardous polymerization will not occur.

CONDITIONS TO AVOID :
Freezing temperatures.

MATERIALS TO AVOID :
Contact with strong alkalies (e.g. ammonia and its solutions, carbonates, sodium hydroxide (caustic), potassium hydroxide, calcium hydroxide (lime), cyanide, sulfide, hypochlorites, chlorites) may generate heat, splattering or boiling and toxic vapors.

HAZARDOUS DECOMPOSITION PRODUCTS :
Under fire conditions: Oxides of carbon, Oxides of nitrogen, HCl, May evolve ammonia under fire conditions.

11. TOXICOLOGICAL INFORMATION

No toxicity studies have been conducted on this product.

CARCINOGENICITY :
None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

The tests for (representative polymers) were performed in environmentally relevant water with dissolved organic carbon (DOC: 4.5 mg/l). The effects on the aquatic organisms are due to external (non-systemic) mode of action, e.g., suffocation or immobilization. In the presence of suspended material, e.g., DOC, the polymers are bound to suspended material and the bioavailability is substantially reduced. As a result, the effects are expected to be lower.

Acute Fish Results :

Species	Exposure	Test Type	Value	Test Descriptor
Zebra Danio	96 hrs	LC50	10 - 100 mg/l	Representative polymer tested in water with DOC

ACUTE INVERTEBRATE RESULTS :

Species	Exposure	Test Type	Value	Test Descriptor
Daphnia magna	48 hrs	LC50	10 - 100 mg/l	Representative polymer tested in water with DOC

ADDITIONAL ECOLOGICAL DATA
NOEC on earthworm: > 1000 mg/l (representative polymer)

MOBILITY :
The product is eliminated from aqueous phase via abiotic process (adsorption on suspended material) to a large extent (>95 %).

BIOACCUMULATION POTENTIAL
No bioaccumulation will occur. The large size of the polymer is incompatible with transport across the cellular membranes.

OTHER INFORMATION
The hazard characterization is based on the tests or potential hazard in the clean water.

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Hazardous Waste: D002

Hazardous wastes must be transported by a licensed hazardous waste transporter and disposed of or treated in a properly licensed hazardous waste treatment, storage, disposal or recycling facility. Consult local, state, and federal regulations for specific requirements.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT :

Proper Shipping Name :	FERRIC CHLORIDE, SOLUTION
Technical Name(s) :	
UN/ID No :	UN 2582
Hazard Class - Primary :	8

Packing Group :	III
Flash Point :	None
Reportable Quantity (per package) :	3,030 lbs
RQ Component :	FERRIC CHLORIDE

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name :	FERRIC CHLORIDE, SOLUTION
Technical Name(s) :	
UN/ID No :	UN 2582
Hazard Class - Primary :	8
Packing Group :	III
Reportable Quantity (per package) :	3,030 lbs
RQ Component :	FERRIC CHLORIDE

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name :	FERRIC CHLORIDE, SOLUTION
Technical Name(s) :	
UN/ID No :	UN 2582
Hazard Class - Primary :	8
Packing Group :	III

15. REGULATORY INFORMATION

This section contains additional information that may have relevance to regulatory compliance. The information in this section is for reference only. It is not exhaustive, and should not be relied upon to take the place of an individualized compliance or hazard assessment. Nalco accepts no liability for the use of this information.

NATIONAL REGULATIONS, USA :

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :
Based on our hazard evaluation, the following substance(s) in this product is/are hazardous and the reason(s) is/are shown below.

Ferric Chloride : Corrosive, HARMFUL

CERCLA/SUPERFUND, 40 CFR 302 :
If a reportable quantity of product is released, it requires notification to the NATIONAL RESPONSE CENTER, WASHINGTON, D.C. (1-800-424-8802). This product contains the following Reportable Quantity (RQ) Substance. Also listed is the RQ for the product.

RQ Substance	RQ
Ferric Chloride	3,030 lbs

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :
This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :
Our hazard evaluation has found this product to be hazardous. The product should be reported under the following indicated EPA hazard categories:

X	Immediate (Acute) Health Hazard
-	Delayed (Chronic) Health Hazard
-	Fire Hazard
-	Sudden Release of Pressure Hazard
-	Reactive Hazard

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :
This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :
The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

FOOD AND DRUG ADMINISTRATION (FDA) Federal Food, Drug and Cosmetic Act :
When use situations necessitate compliance with FDA regulations, this product is acceptable under : 21 CFR 176.170 Components of paper and paperboard in contact with aqueous and fatty foods and 21 CFR 176.180 Components of paper and paperboard in contact with dry foods.

For use: 1) as a retention aid employed prior to the sheet-forming operation in the manufacture of paper and paperboard at a level not to exceed 1% by weight of the finished paper and paperboard, and 2) at the size press at a level not to exceed 0.017% by weight of the finished paper and paperboard (expressed as polymer).

NSF INTERNATIONAL :
This product has received NSF/International certification under NSF/ANSI Standard 60 in the coagulation and flocculation category. The official name is "Polymer Blends." Maximum product application dosage is : 176 mg/l.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :
This product contains the following substances listed in the regulation. Additional components may be unintentionally present at trace levels.

Substance(s)	Citations
• Ferric Chloride	Sec. 311

CLEAN AIR ACT, Sec. 112 (Hazardous Air Pollutants, as amended by 40 CFR 63), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :
Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.

CALIFORNIA PROPOSITION 65 :
Substances listed under California Proposition 65 are not intentionally added or expected to be present in this product.

MICHIGAN CRITICAL MATERIALS :
Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.

STATE RIGHT TO KNOW LAWS :
The following substances are disclosed for compliance with State Right to Know Laws:

Ferric Chloride	7705-08-0
Ferrous Chloride	7758-94-3
Water	7732-18-5

INTERNATIONAL CHEMICAL CONTROL LAWS :

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :
The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

AUSTRALIA
All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

CHINA
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

JAPAN
All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

KOREA
All substances in this product comply with the Toxic Chemical Control Law (TCCL) and are listed on the Existing Chemicals List (ECL)

PHILIPPINES
All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

16. OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS™ CD-ROM Version),
Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH,
(TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

Prepared By : Product Safety Department
Date Issued : 03/14/2013
Version Number : 1.6

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

Generator Waste Profile
Profile #: 01315

[redacted]

WASTE INFORMATION

Name of Waste/Common Chemical Name:

Waste Sodium Hydroxide Solution

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

Tin Winning

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:	Suspended Solids	Layers:	Specific Gravity:	
☐ White/Clear ☐ Black/Brown ☒ Other Yellowish	☐ 0-1 % ☒ 3-5 % ☐ 1-3 % ☐ > 5%	☐ Multi-Layered ☐ Bi-Layered ☒ Single Phase	☐ <0.8 ☒ 1.0 – 1.2 ☐ 0.8 – 1.0 ☐ 1.3 – 1.4 Exact / Other _____	acceptable 03/9/18

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	
Sodium Hydroxide	25	15	%				%
Water	85	75	%				%
See Attached Analytical Report for Additional Information			%				%
			%				%
			%				%

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	☒	____ ppm	Aromatic Amine	☒	____ ppm
Dioxins	☒	____ ppm	Pesticides	☒	____ ppm
Cyanides Reactive	☒	____ ppm	Rodenticides	☒	____ ppm
Cyanides Total	☒	____ ppm	Fungicides	☒	____ ppm
Sulfides Reactive	☒	____ ppm			
Sulfides Total	☒	____ ppm			

Arsenic (As)	D004	☒	< 5	ppm	____ ppm
Barium (Ba)	D005	☒	<100	ppm	____ ppm
Cadmium (Cd)	D006	☒	< 1	ppm	____ ppm
Chromium (Cr)	D007	☒	< 5	ppm	____ ppm
Lead (Pb)	D008	☒	< 5	ppm	____ ppm
Mercury (Hg)	D009	☒	<0.2	ppm	____ ppm
Selenium (Se)	D010	☒	< 1	ppm	____ ppm
Silver (Ag)	D011	☒	< 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 100
3. DOT Shipping Name RQ, Waste Sodium Hydroxide Solution Hazard Class 8 UN/NA 1824
PG II ERG 154 Hazardous Constituents for "n.o.s."
4. Method of Shipment: ☒ Bulk Tanker ☐ Vac truck ☐ Rail Car ☐ Drums ☐ Totes
5. Number of Units to Ship Now: 10,000 gallons 6. Anticipated Volume / Units per Year: 200,000-300,000 gallons 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 and/or analytical information.

[redacted]

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. 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.

[redacted]

New Jersey
ACCUTEST
LABORATORIES

10/12/11

[redacted]

Technical Report for:

[redacted]

AMG93011

Accutest Job Number: JA87812

Sampling Date: 09/30/11

Report to:

[redacted]

Total number of pages in report: 17

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

David N. Speis
VP, Laboratory Director

[redacted]

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

Test results relate only to samples analyzed.

Sections: 1 2 3

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Accutest Laboratories

Sample Summary

[redacted]

Job No: JA87812

Sample Number	Collected Date	Time	By	Matrix Received	Code	Type	Client Sample ID
JA87812-1	09/30/11	10:50	KH	09/30/11	AQ	Water	PUMP VALVE

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	PUMP VALVE		
Lab Sample ID:	JA87812-1	**Date Sampled:**	09/30/11
Matrix:	AQ - Water	**Date Received:**	09/30/11
Method:	EPA 624	**Percent Solids:**	n/a

[redacted]

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2E69996.D	1000	10/06/11	MAH	n/a	n/a	V2E3136
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	ND	50000	2300	ug/l	
107-13-1	Acrylonitrile	ND	10000	3500	ug/l	
71-43-2	Benzene	ND	1000	280	ug/l	
75-27-4	Bromodichloromethane	ND	1000	150	ug/l	
75-25-2	Bromoform	ND	1000	190	ug/l	
74-83-9	Bromomethane	ND	1000	280	ug/l	
56-23-5	Carbon tetrachloride	ND	1000	170	ug/l	
108-90-7	Chlorobenzene	ND	1000	190	ug/l	
75-00-3	Chloroethane	ND	1000	400	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5000	890	ug/l	
67-66-3	Chloroform	ND	1000	150	ug/l	
74-87-3	Chloromethane	ND	1000	200	ug/l	
124-48-1	Dibromochloromethane	ND	1000	180	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1000	110	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1000	200	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1000	220	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2000	720	ug/l	
75-34-3	1,1-Dichloroethane	ND	1000	140	ug/l	
107-06-2	1,2-Dichloroethane	ND	1000	390	ug/l	
75-35-4	1,1-Dichloroethene	ND	1000	300	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1000	200	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1000	270	ug/l	
78-87-5	1,2-Dichloropropane	ND	1000	180	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1000	120	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1000	180	ug/l	
100-41-4	Ethylbenzene	ND	1000	180	ug/l	
75-09-2	Methylene chloride	ND	1000	310	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1000	160	ug/l	
127-18-4	Tetrachloroethene	ND	1000	190	ug/l	
108-88-3	Toluene	ND	1000	120	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1000	160	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1000	230	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	PUMP VALVE		
Lab Sample ID:	JA87812-1	**Date Sampled:**	09/30/11
Matrix:	AQ - Water	**Date Received:**	09/30/11
Method:	EPA 624	**Percent Solids:**	n/a

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1000	170	ug/l	
75-69-4	Trichlorofluoromethane	ND	2000	600	ug/l	
75-01-4	Vinyl chloride	ND	1000	180	ug/l	
1330-20-7	Xylenes (total)	ND	1000	170	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4 (SUR)	107%		68-134%
2037-26-5	Toluene-D8 (SUR)	96%		87-112%
460-00-4	4-Bromofluorobenzene (SUR)	91%		83-116%
1868-53-7	Dibromofluoromethane (S)	109%		85-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Vola			ug/l	

(a) pH = 7 Sample pH did not satisfy field preservation criteria. Dilution required due to sample foaming.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	PUMP VALVE		
Lab Sample ID:	JA87812-1	Date Sampled:	09/30/11
Matrix:	AQ - Water	Date Received:	09/30/11
Method:	EPA 625 EPA 625	Percent Solids:	n/a
[redacted]			

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	F99677.D	1	10/10/11	NAP	10/05/11	OP52240	EF4640
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	0.95	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.2	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	1.6	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.6	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	0.89	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	0.72	ug/l	
88-75-5	2-Nitrophenol	ND	2.0	1.8	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.84	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.9	ug/l	
108-95-2	Phenol	ND	2.0	0.50	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	2.0	1.3	ug/l	
83-32-9	Acenaphthene	ND	1.0	0.35	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.38	ug/l	
120-12-7	Anthracene	ND	1.0	0.40	ug/l	
92-87-5	Benzidine	ND	20	0.28	ug/l	
56-55-3	Benzo(a)anthracene	0.46	1.0	0.36	ug/l	J
50-32-8	Benzo(a)pyrene	ND	1.0	0.37	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.59	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.42	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.42	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.30	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.59	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.98	ug/l	
106-47-8	4-Chloroaniline	ND	2.0	0.40	ug/l	
218-01-9	Chrysene	0.5	1.0	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.65	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.53	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.74	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.43	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.0	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	2.0	0.45	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.0	0.16	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PUMP VALVE
Lab Sample ID: JA87812-1
Matrix: AQ - Water
Method: EPA 625 EPA 625

Date Sampled: 09/30/11
Date Received: 09/30/11
Percent Solids: n/a

ABN TPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	2.0	0.18	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	2.0	0.86	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	2.0	0.56	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.0	1.2	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.54	ug/l	
84-74-2	Di-n-butyl phthalate	2.2	2.0	0.59	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.57	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.39	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.33	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.66	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.25	ug/l	
86-73-7	Fluorene	ND	1.0	0.45	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	0.54	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.18	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	0.41	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.28	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.30	ug/l	
78-59-1	Isophorone	ND	2.0	0.59	ug/l	
91-20-3	Naphthalene	2.0	1.0	0.32	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.42	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	2.0	0.46	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.47	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.52	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.36	ug/l	
129-00-0	Pyrene	0.8	1.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.34	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	0%		10-111%
4165-62-2	Phenol-d5	0%		10-117%
118-79-6	2,4,6-Tribromophenol	92%		25-151%
4165-60-0	Nitrobenzene-d5	36%		40-131%
321-60-8	2-Fluorobiphenyl	77%		48-117%
1718-51-0	Terphenyl-d14	102%		20-141%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	3.33	97	ug/l	J
	unknown	3.66	410	ug/l	J

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PUMP VALVE		
Lab Sample ID:	JA87812-1	**Date Sampled:**	09/30/11
Matrix:	AQ - Water	**Date Received:**	09/30/11
Method:	EPA 625 EPA 625	**Percent Solids:**	n/a

[redacted]

ABN PPL List

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	5.83	230	ug/l	J
	unknown	5.90	240	ug/l	J
	Ethanol -butoxyethoxy	6.17	92	ug/l	J
	unknown	7.35	380	ug/l	J
	unknown	7.39	450	ug/l	J
	unknown	7.46	920	ug/l	J
	unknown	7.50	190	ug/l	J
	unknown	7.55	460	ug/l	J
	unknown	9.14	88	ug/l	J
	unknown	13.05	280	ug/l	J
	unknown ester	13.16	97	ug/l	J
	alkane	13.81	98	ug/l	J
	unknown	14.10	250	ug/l	J
	alkane	14.18	86	ug/l	J
	alkane	14.53	160	ug/l	J
	alkane	14.86	120	ug/l	J
	unknown	14.96	150	ug/l	J
	unknown	15.06	150	ug/l	J
	alkane	15.17	130	ug/l	J
	alkane	15.47	89	ug/l	J
	unknown	16.85	260	ug/l	J
	unknown	18.00	88	ug/l	J
	unknown	18.29	160	ug/l	J
	Total TIC, Semi-Volatile		4302	ug/l	J

(a) There is no sample left to reextract for confirmation.
(b) The spike standard was not added.
(c) double spiked.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	PUMP VALVE		
Lab Sample ID:	JA87812-1	**Date Sampled:**	09/30/11
Matrix:	AQ - Water	**Date Received:**	09/30/11
Method:	EPA 608 EPA 608	**Percent Solids:**	n/a

[redacted]

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G59060.D	1	10/06/11	TDR	10/06/11	OP52242	G3G2138
Run #2	XX111855.D	1	10/07/11	AZ	10/06/11	OP52243	GXX4186

	Initial Volume	Final Volume
Run #1	700 ml	10.0 ml
Run #2	700 ml	10.0 ml

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.029	0.0048	ug/l	
319-84-6	alpha-BHC	ND	0.029	0.0037	ug/l	
319-85-7	beta-BHC	ND	0.029	0.0088	ug/l	
319-86-8	delta-BHC	ND	0.029	0.0044	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.029	0.0025	ug/l	
12789-03-6	Chlordane	ND	0.71	0.095	ug/l	
60-57-1	Dieldrin	ND	0.029	0.0024	ug/l	
72-54-8	4,4'-DDD	ND	0.029	0.0035	ug/l	
72-55-9	4,4'-DDE	ND	0.029	0.0024	ug/l	
50-29-3	4,4'-DDT	ND	0.029	0.0070	ug/l	
72-20-8	Endrin	ND	0.029	0.0043	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.029	0.0056	ug/l	
7421-93-4	Endrin aldehyde	ND	0.029	0.0092	ug/l	
959-98-8	Endosulfan-I	ND	0.029	0.0030	ug/l	
33213-65-9	Endosulfan-II	ND	0.029	0.0046	ug/l	
76-44-8	Heptachlor	ND	0.029	0.0037	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.029	0.0021	ug/l	
72-43-5	Methoxychlor	ND	0.029	0.0097	ug/l	
8001-35-2	Toxaphene	ND	0.36	0.13	ug/l	
12674-11-2	Aroclor 1016	ND	0.71	0.13	ug/l	
11104-28-2	Aroclor 1221	ND	0.71	0.67	ug/l	
11141-16-5	Aroclor 1232	ND	0.71	0.56	ug/l	
53469-21-9	Aroclor 1242	ND	0.71	0.23	ug/l	
12672-29-6	Aroclor 1248	ND	0.71	0.22	ug/l	
11097-69-1	Aroclor 1254	ND	0.71	0.16	ug/l	
11096-82-5	Aroclor 1260	ND	0.71	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	62%	68%	21-135%
877-09-8	Tetrachloro-m-xylene	62%	67%	21-135%
2051-24-3	Decachlorobiphenyl	97%	97%	24-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID: PUMP VALVE
Lab Sample ID: JA87812-1
Matrix: AQ - Water

Date Sampled: 09/30/11
Date Received: 09/30/11
Percent Solids: n/a

[redacted]

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	<1200	1200	ug/l	100	10/06/11	10/08/11	ND	SW846 6010C [4]	SW846 3010A [6]
Arsenic	[redacted]	60	ug/l	10	10/06/11	10/07/11	VC	SW846 6010C [2]	SW846 3010A [6]
Beryllium [a]	<20	20	ug/l	10	10/06/11	10/07/11	VC	SW846 6010C [2]	SW846 3010A [6]
Cadmium [a]	<60	60	ug/l	10	10/06/11	10/07/11	VC	SW846 6010C [2]	SW846 3010A [6]
Chromium [a]	<200	200	ug/l	10	10/06/11	10/07/11	VC	SW846 6010C [2]	SW846 3010A [6]
Copper [a]	<200	200	ug/l	10	10/06/11	10/07/11	VC	SW846 6010C [2]	SW846 3010A [6]
Lead [a]	<600	600	ug/l	100	10/06/11	10/07/11	VC	SW846 6010C [3]	SW846 3010A [6]
Mercury [b]	<1.6	1.6	ug/l	1	10/05/11	10/05/11	MP	SW846 7470A [1]	SW846 7470A [5]
Nickel [a]	<2000	2000	ug/l	100	10/06/11	10/07/11	VC	SW846 6010C [3]	SW846 3010A [6]
Selenium [a]	209	200	ug/l	10	10/06/11	10/07/11	VC	SW846 6010C [2]	SW846 3010A [6]
Silver [a]	<200	200	ug/l	10	10/06/11	10/07/11	VC	SW846 6010C [2]	SW846 3010A [6]
Thallium	<400	400	ug/l	100	10/06/11	10/08/11	ND	SW846 6010C [4]	SW846 3010A [6]
Zinc [a]	2930	400	ug/l	10	10/06/11	10/07/11	VC	SW846 6010C [2]	SW846 3010A [6]

(1) Instrument QC Batch: MA27211
(2) Instrument QC Batch: MA27231
(3) Instrument QC Batch: MA27232
(4) Instrument QC Batch: MA27239
(5) Prep QC Batch: MP60574
(6) Prep QC Batch: MP60602

(a) Elevated detection limit due to dilution required for matrix interference (indicated by failing internal standard on original analysis).
(b) Elevated sample detection limit due to difficult sample matrix.

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
Tel: 732-329-0200 FAX: 732-329-3499/3480

[redacted]

PAGE 1 OF 1

Accutest Quote #: KU22FBS

Accutest Job #: JA87812

[redacted]

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water, GW - Ground Water, WW - Water, SW - Surface Water, SO - Soil, SL - Sludge, SED - Sediment, OI - Oil, LIQ - Other Liquid, AIR - Air, SOL - Other Solid, WP - Wipe, FB - Field Blank, EB - Equipment Blank, RB - Rinse Blank, TB - Trip Blank

Accutest Sample #	Field ID / Point of Collection	Date	Time	Sampled by	Matrix	# of bottles										PID	ABN	PPCB	Metals	CN	VOC	LAB USE ONLY
1	Pump value -1				L	1				X						X						ØES,
2/3	Pump value -1				L	2									X		X					AMET31,
4/5	Pump value -1				L	2									X			X				48X
6	Pump value -1				L	1			F										X			2120
7	Pump value -1				L	1		V												X		
8-11	Pump value -1				L	3	l														X	

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [x] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format ____
- [ ] Other ____

Commercial "A" = Results Only

[redacted]

JA87812: Chain of Custody

Page 1 of 3

ACCUTEST LABORATORIES **Sample Receipt Summary - Problem Resolution**

[redacted]

Response Date: 10/3/2011

Response: 1. Sample collection date is 9/30/11 @ 10:50.
2. OK to proceed with analysis as noted.

All above as per Ken Heavlow

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F:732.329.3499

Dayton, New Jersey
www.accutest.com

JA87812: Chain of Custody
Page 3 of 3

Accutest Laboratories

Report of Analysis

Client Sample ID: PUMP VALVE
Lab Sample ID: JA87812-1
Matrix: AQ - Water

Date Sampled: 09/30/11
Date Received: 09/30/11
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	1200	1200	ug/l	100	10/06/11	10/08/11	ND	SW846 6010C [4]	SW846 3010A [7]
Arsenic [a]	1160	60	ug/l	10	10/06/11	10/07/11	VC	SW846 6010C [2]	SW846 3010A [7]
Beryllium [a]	20	20	ug/l	10	10/06/11	10/07/11	VC	SW846 6010C [2]	SW846 3010A [7]
Cadmium [a]	60	60	ug/l	10	10/06/11	10/07/11	VC	SW846 6010C [2]	SW846 3010A [7]
Chromium [a]	200	200	ug/l	10	10/06/11	10/07/11	VC	SW846 6010C [2]	SW846 3010A [7]
Copper [a]	200	200	ug/l	10	10/06/11	10/07/11	VC	SW846 6010C [2]	SW846 3010A [7]
Lead [a]	600	600	ug/l	100	10/06/11	10/07/11	VC	SW846 6010C [3]	SW846 3010A [7]
Mercury [b]	1.6	1.6	ug/l	1	10/05/11	10/05/11	MP	SW846 7470A [1]	SW846 7470A [6]
Nickel [a]	2000	2000	ug/l	100	10/06/11	10/07/11	VC	SW846 6010C [3]	SW846 3010A [7]
Selenium [a]	200	200	ug/l	10	10/06/11	10/07/11	VC	SW846 6010C [2]	SW846 3010A [7]
Silver [a]	200	200	ug/l	10	10/06/11	10/07/11	VC	SW846 6010C [2]	SW846 3010A [7]
Thallium	400	400	ug/l	100	10/06/11	10/08/11	ND	SW846 6010C [4]	SW846 3010A [7]
Tin	663000	250	ug/l	5	10/20/11	10/22/11	BL	SW846 6010C [5]	SW846 3010A [7]
Zinc [a]	4930	400	ug/l	10	10/06/11	10/07/11	VC	SW846 6010C [2]	SW846 3010A [7]

(1) Instrument QC Batch: MA27211
(2) Instrument QC Batch: MA27231
(3) Instrument QC Batch: MA27232
(4) Instrument QC Batch: MA27239
(5) Instrument QC Batch: MA27316
(6) Prep QC Batch: MP60574
(7) Prep QC Batch: MP60602

(a) Elevated detection limit due to dilution required for matrix interference (indicated by failing internal standard on original analysis).
(b) Elevated sample detection limit due to difficult sample matrix.

RL = Reporting Limit

[redacted]

AMG Resources has grown into one of the world's largest processors and marketers of ferrous & non-ferrous scrap metal and a leading supplier of prime and secondary steel products by providing the highest level of customer service, leveraging its marketing expertise to offer competitive pricing and being creative in finding solutions for its customers' needs.

[redacted]

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	3/19/18
Receiving ID#	
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT A[redacted]	
Client	Caustic
Transporter	
Time in	
Time out	
Received by	PJ
Sampled by	

LAB INFORMATION			
Compatible? (RT#) caustics	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?	N/A	Calcium	
TOC (ppm)(CC Waste Only)?	N/A	Total Iron	
Flash Point (°F)	> 140°F	Magnesium	
pH (S.U.)	12.5	Sodium Chloride	
Cyanides? (mg/L)	L30	Bicarbonate	
Sulfides? (ppm)	L200	Carbonate	
Specific Gravity	1.28	TDS	
Physical Description	liquid	Resistivity	
Stream Consistency	(Yes) No	Sulfate	
Oil in Sample	Yes (No)		
Temperature	64°F		
Conductivity	180 mS		
% Solids	47%		
Turbidity	(Yes) No		
Color (visual)	beige		
TSS (%)	L1%		
Radiation Screen (as needed)	negative		
Lab Signature			

EGT

01317

one-time
8,000 gal

MID057002602

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
[redacted]			

SECTION 2. WASTE INFORMATION

Common Name of Waste: Big Pit Waste Water

Process Generating Waste: Containment Pit from overflow of Electroplating

Waste Volume Produced Annually: 10,000-20,000 gallons

Shipping Increments: ☑ One Time ☐ Weekly ☐ Monthly ☐ Quarterly ☐ Yearly ☐ Other _____

Check Any Hazardous Characteristics That Apply: ☐ Reactive ☐ Corrosive ☐ Toxic ☐ Flammable ☐ Listed

SECTION 3. USED / WASTE OIL

D007

Does your waste stream contain 10% or more oil? ☐ Yes ☒ No

Is this oil considered to be a "used oil" as determined by 40CFR 260.10? ☒ Yes ☐ No

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

acceptable @ 03/5/18

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 waste?	☒ YES ☐ NO
What is the Color?	☐ White ☐ Gray ☐ Black ☐ Clear ☑ Dark Yellow
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)	1.0-1.2
Specific Gravity	
pH:	5.7
Flash Point (closed cup)	≥200
Viscosity at 70° F	☐ High ☐ Medium ☒ Low
Percent Composition	>95 % Water ____ % Oil ____ % Rag 45 % Solids
Solids Composition:	☒ Suspended ☐ Settable ☐ Both

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

= 0 VOCs

Chemical	Minimum	Maximum
Water	90 %	99 %
Rinses (overflow)	1 %	10 %
	%	%
	%	%

SECTION 5. TCLP AND TESTING CERTIFICATION

Please check the "YES" column for constituents that have been TCLP tested and attach analytical results to this profile or check the "NO" column verifying the constituent is not present above hazardous levels. ***All constituents must have either a "YES" or "NO" checked.***

Check the method used: ☐ Total ☐ TCLP ☐ EP ☐ Toxicity

METALS mg/L (ppm)

Metal	Level > than	Yes	No
001D Copper	100.0	☐	☒
003D Zinc	500.0	☐	☒
D004 Arsenic	5.0	☐	☒
D005 Barium	100.0	☐	☒
D006 Cadmium	1.0	☐	☒
D007 Chromium	5.0	☐	☒
D008 Lead	5.0	☐	☒
D009 Mercury	0.2	☐	☒
D010 Selenium	1.0	☐	☒
D011 Silver	5.0	☐	☒

ORGANICS

Material	Level > than	Yes	No
D018 Benzene	0.5	☐	☒
D019 Carbon Tetrachloride	0.5	☐	☒
D021 Chlorobenzene	100.0	☐	☒
D022 Chloroform	5.0	☐	☒
D028 1, 2-Dichloroethane	0.5	☐	☒
D029 1, 1-Dichloroethylene	0.7	☐	☒
D035 Methyl Ethyl Ketone	200.0	☐	☒
D039 Tetrachloroethylene	0.7	☐	☒
D040 Trichloroethylene	0.5	☐	☒
D043 Vinyl Chloride	0.2	☐	☒

ACID EXTRACTABLES			
Material	Level > than	Yes	No
D023 o-Cresol	200	☐	☒
D024 m-Cresol	200	☐	☒
D025 p-Cresol	200	☐	☒
D026 Cresol	200	☐	☒
D037 Pentachlorophenol	100	☐	☒
D041 2, 4, 5-Trichlorophenol	400	☐	☒
D042 2, 4, 6-Trichlorophenol	2.0	☐	☒

BASE NEUTRAL EXTRACTABLES			
Material	Level > than	Yes	No
D027 1, 4-Dichlorobenzene	7.5	☐	☒
D030 2, 4-Dinitrotoluene	0.13	☐	☒
D032 Hexachlorobenzene	0.13	☐	☒
D033 Hexachlorobutadiene	0.5	☐	☒
D034 Hexachloroethane	3.0	☐	☒
D036 Nitrobenzene	2.0	☐	☒

HERBICIDES and PESTICIDES			
Material	Level > than	Yes	No
D012 Endrin	0.02	☐	☒
D013 Lindane	0.4	☐	☒
D014 Methoxychlor	10.0	☐	☒
D015 Toxaphene	0.5	☐	☒
D016 2, 4-D	10.0	☐	☒
D017 2, 4, 5-TP (Silvex)	1.0	☐	☒
D020 Chlordane	0.03	☐	☒
D031 Heptachlor	0.008	☐	☒

SECTION 6. SHIPPING INFORMATION

Is this waste a D.O.T. Hazardous Material?	☐ YES ☒ NO
State Waste Codes:	☐ 017L – Crankcase Oil ☐ 019L – Coolants and Water Soluble Oil ☐ 021L – Other Oil ☑ 029L – Other Wastes
Proper Shipping Name:	~~RCRA Hazardous Liquid~~ NA, NA3082, Hazardous Waste Liquid, N.O.S. (chrome), 9, III, 9 (ERG Guide 171)
Method of Shipment:	☒ Bulk ☐ Drum ☐ Tote
Additional Handling / Comments:	
Waste Receipt Classification:	☐ Organic Waste ☐ Oily Waste ☒ 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 well 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 reuse 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 constructed 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.

Advanced RESOURCE Recovery, L.L.C.

Used Oil Certification

Advanced Resource Recovery, L.L.C. is required under Federal Law 40CFR 279.53 to keep on file the following information pertaining to used oil waste streams.

[redacted]

Please mark with an "X" in the appropriate box below, the statement best describing your used oil waste stream:

☐ The oil in our waste stream is below 1,000 ppm total halogens and therefore is not regulated. This oil also does not exceed regulated levels of individual halogenated constituents including PCB's. *(If this box is marked, please attach the PCB analysis for this waste stream.)*

☐ The oil in our waste stream exceeds 1,000 ppm halogens and is exempt from hazardous presumption because the process uses petroleum products containing non-hazardous chlorinated substances. *(If this box is marked, please attach either the Material Safety Data Sheet (MSDS) demonstrating chlorinated paraffin content or a F-Series Solvent-Scan demonstrating the oil has not been mixed with chlorinated solvents.)*

The undersigned hereby certifies the marked paragraph above and any attached information is true and accurate, that the used oil stream has not been mixed with PCB's and PCB's do not exist at the generator's facility. The undersigned has executed this Certification with full and complete power and authority to do so, as of the day and year written below.

Generator:

[redacted]

A-Team USA Advanced

Sustainable Solutions in Motion™

Sample Analysis

[redacted]

Sample Number #1	
Material Pit Waste	check metals + treatability
Annual Volume 10,000-20,000	
pH	
Zinc	
Flash	
%Oil	
%Rag	Sample for % solid
%Solids	
Halogens	
Recommended Treat	

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

TRACE
ANALYTICAL LABORATORIES, INC.

231-773-5998 Phone
888-979-4459 Fax
www.trace-labs.com

March 05, 2018

[redacted]

Enclosed are your analytical results. The results of this report relate only to the samples listed in the body of this report.

All reports were examined through Trace's validation process to ensure that requirements for quality and completeness were satisfied. All reported analytical results were obtained in accordance with the methods referenced on the reports. Every practical effort was made to meet the reporting limit specifications for this work, however, some results may have raised reporting limits to correct for percent solids.

For clients that require NELAC Accreditation, Trace certifies that these test results meet all requirements of the NELAC Standard, except for those analytes with a "N" notation. These analytes have not been evaluated by NELAC at Trace's discretion and will not be reported unless requested by client.

If you have questions concerning this report, please contact me at 231.773.5998 or by email at jmink@trace-labs.com.

Sincerely,

Jon Mink
Senior Project Manager
Enclosures

ACCREDITED IN ACCORDANCE WITH nelac

NJDEP Accreditation No. MI008

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

TRACE
ANALYTICAL LABORATORIES, INC.

231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

SAMPLE SUMMARY

[redacted]

Trace ID	Sample ID	Matrix	Collected By	Date Collected	Date Received
T18B355-01	02212018Z - Big Pit Waste	Wastewater		02/21/18 09:00	02/22/18 14:09

CERTIFICATE OF ANALYSIS

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

TRACE ANALYTICAL LABORATORIES, INC.

231-773-5998 Phone
888-879-4489 Fax
www.trace-labs.com

AN EXPLANATION OF TERMS AND SYMBOLS WHICH MAY OCCUR IN THIS REPORT

DEFINITIONS

LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MS	Matrix Spike
MSD	Matrix Spike Duplicate
RPD	Relative Percent Difference
DUP	Matrix Duplicate
RDL	Reporting Detection Limit
MCL	Maximum Contamination Limit
TIC	Tentatively Identified Compound
<, ND or U	Indicates the compound was analyzed for but not detected
*	Indicates a result that exceeds its associated MCL or Surrogate control limits
N	Indicates that the compound has not been evaluated by NELAC
NA	Indicates that the compound is not available.

NOTE: Samples for volatiles that have been extracted with a water miscible solvent were corrected for the total volume of the solvent/water mixture.
Solid matrices Method Blanks are at 100% solids as such results are the same wet or dry.

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2241 Black Creek Road
Muskegon, MI 49444-2673

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ANALYTICAL LABORATORIES, INC.

231-773-5998 Phone
888-879-4469 Fax
www.trace-labs.com

[redacted]

ANALYTICAL RESULTS

Trace ID: T18B355-01
Sample ID: 02212016Z - Big Pit Waste

Date Collected: 02/21/18 09:00
Date Received: 02/22/18 14:09

Matrix: [redacted]

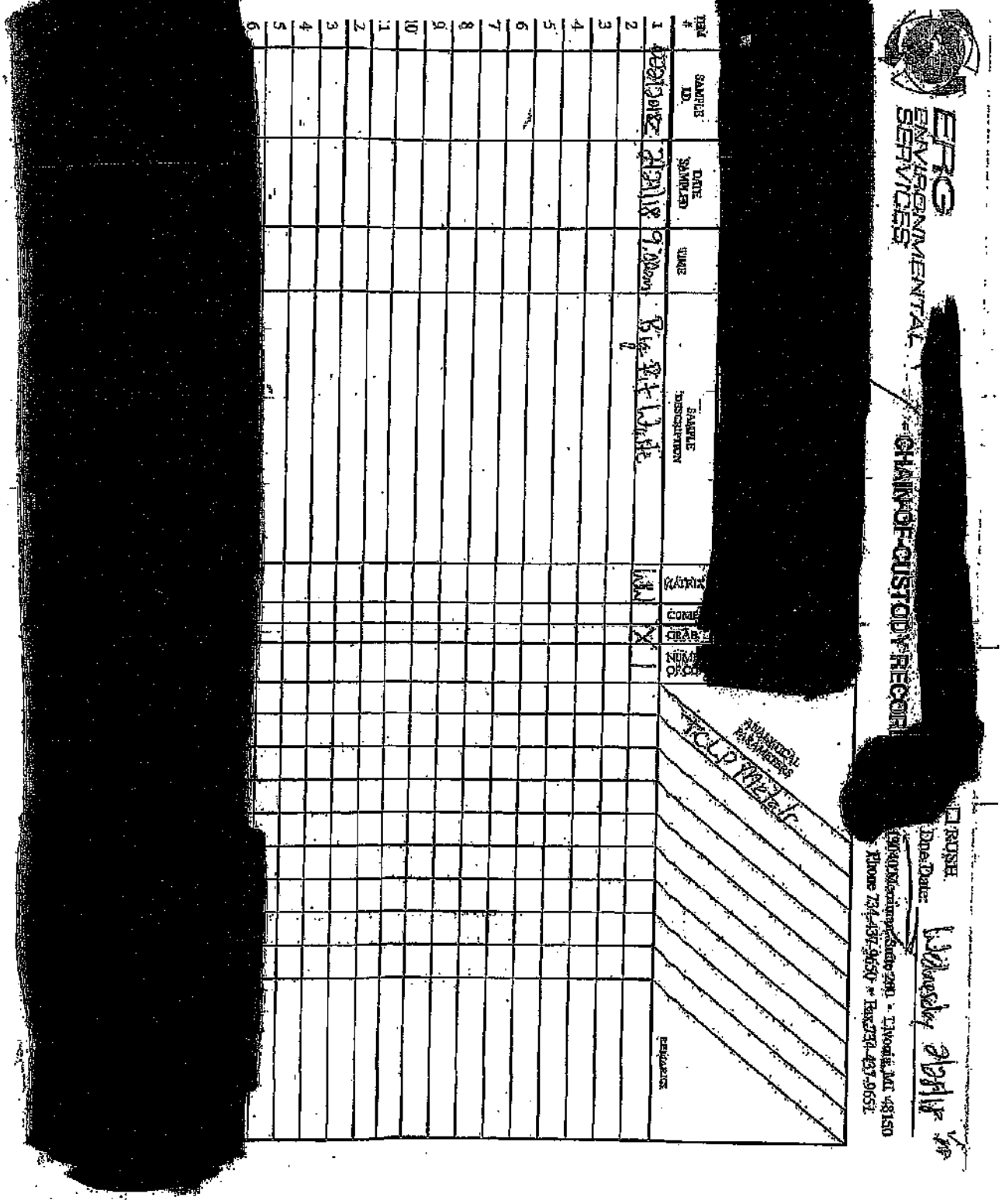
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TCLP									
Analysis Method: EPA 6010B									
Batch: T075233									
Arsenic	<0.30 mg/L	0.30	1	02/26/18	nws	03/01/18	dtm		5.0
Barium	<1.0 mg/L	1.0	1	02/26/18	nws	03/01/18	dtm		100
Cadmium	<0.10 mg/L	0.10	1	02/26/18	nws	03/01/18	dtm		1.0
[redacted]	[redacted]	0.90	10	02/26/18	nws	03/02/18	dtm		5.0
Lead	<0.50 mg/L	0.50	1	02/26/18	nws	03/01/18	dtm		5.0
Selenium	<0.60 mg/L	0.60	1	02/26/18	nws	03/01/18	dtm		1.0
Silver	<0.10 mg/L	0.10	1	02/26/18	nws	03/02/18	dtm		5.0
Analysis Method: EPA 7470A									
Batch: T076226									
Mercury	<0.010 mg/L	0.010	1	02/26/18	nws	03/01/18	nws		0.20

CERTIFICATE OF ANALYSIS

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
[redacted]44-2673

231-773-5998 Phone
888-879-4469 Fax
www.[redacted]e-labs.com

TRACE
ANALYTICAL LABORATORIES, INC.



CERTIFICATE OF ANALYSIS

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SAMPLE LOG IN CHECKLIST

Cooler Receipt

Cooler/sample delivered by: Trace courier [X]
Hand delivered [ ]
Commercial courier [ ] UPS [ ] FED EX [ ] US Mail [ ]
Name of delivery person: [illegible]

Tracking Number: [X] Not Applicable
Tracking #

COC Seals present and intact on cooler? [X] Not Applicable [ ] No [ ] Yes
Custody seals signed by Client? [ ] No [ ] Yes Client custody seal # (if applicable):

Coolant and Temperature

Type of Coolant Used

Slurry w/ crushed, cubed, or chip ice? [ ]
Multiple bags of ice around samples? [ ]
Ice Packs/ Blue Ice [ ]
No Coolant Present [X]

Ice still present upon receipt (circle one):
Yes No N/A

Cooler Temperature

Correction Factors: *Digital Stick Thermometer CF = -0.1°C
*IR Thermometer CF = -0.4°C

Representative Sample Temperature: 2.9 °C (check one below)
[ ] Temp Blank (Stick Thermometer)
[X] Client Sample (IR Thermometer)

Melt Water: WMO °C (Use digital stick thermometer)

General

	Yes	No	NA	Comments
All bottles arrived unbroken with labels in good condition?	X			
Each sample point is in a sealed plastic bag?		X		
Labels filled out completely?	X			
All bottle labels agree with Chain of Custody (COC)?	X			
Sufficient sample to run tests requested?	X			
pH checked and samples at correct pH?			X	See Below
Correct preservative added to samples?			X	
Air bubbles absent from VOAs?			X	
COC filled out properly and signed by client?	X			
COC signed in by TRACE sample custodian?	X			
Was project manager called and samples discussed?		X		

Notes:

EMD pH Test Strips Used:
[ ] pH 0-2.5 Lot: HC9718039
[ ] pH 11.0-13.0 Lot: HC9547328
[ ] Other

Form 70-5.33
Effective 2/1/18

TRACE Analytical Laboratories, Inc.

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	3/14/18
Receiving ID#	
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
Generator	[redacted]
Client	
Transporter	
Time in	
Time out	
Received by	AS
Sampled by	

LABORATORY INFORMATION			
Compatible? (RT#) bases	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?	N/A	Calcium	
TOC (ppm)(CC Waste Only)?	N/A	Total Iron	
Flash Point (°F)	> 140°F	Magnesium	
pH (S.U.)	8.4	Sodium Chloride	
Cyanides? (mg/L)	<30	Bicarbonate	
Sulfides? (ppm)	<200	Carbonate	
Specific Gravity	1.00	TDS	
Physical Description	liquid	Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	36°F		
Conductivity	36 mS		
% Solids	4%		
Turbidity	(Yes) No		
Color (visual)	red oxide		
TSS (%)	2%		
Radiation Screen (as needed)	negative		
Lab Signature			

EnviroSolids, L.L.C.
6011 Wyoming Ave.
Dearborn, MI 48126
Phone 313-582-8032 Fax 313-582-1422

01320
App #

Generator Waste Profile

GENERATOR INFORMATION

[redacted]

SHIPPING AND PACKAGING INFORMATION

Shipping Volume: 2000 gallons Frequency: ☐ One Time Only ☐ Semi-Monthly

DOT Shipping Name: Non-DOT Regulated

☐ Weekly ☐ Yearly ☐ Quarterly
☒ Monthly ☐ Daily ☐ Semi-Annual

Packaging: ☐ Bulk Solid (yards³/tons) ☐ Drums/Totes ☐ Other (5 gal. pails, etc.)
☒ Bulk liquids (Gallons) ☐ CubicYard Boxes _____

PHYSICAL CHARACTERISTICS

Color: (describe) Black Odor: (describe) _____

accepted
09
031618

Physical state at 70F (check all that apply)
☐ Solid ☐ Liquid ☒ Sludge ☐ Powder/Dust

Phases/Layers (check all that apply)
☐ Single ☐ Bi-Layered ☐ Multi-Layered

Physical Composition
% Oil _____ % Water 10 % Solids 10 % Sludge 80

MATERIAL DESCRIPTION

Common Name of Waste: Sludge

Provide a detailed description of the waste process generating this waste:
Metal parts are dipped into water baths from a conveyor. Once water becomes dark from residual waste is pumped out and then sludge is at bottom of tank.

REGULATORY INFORMATION

Based upon RCRA waste regulations (40 CFR 261) and Michigan Act 451 Rules answer the following questions:

1 Is this an **EPA RCRA** listed hazardous waste (F, K, P, or U)? ☐ YES ☒ NO

2 Is this an **EPA RCRA** characteristic hazardous waste (D001- D043)? ☐ YES ☒ NO

3 Is this a **MICHIGAN** hazardous waste (other than RCRA)? ☐ YES ☒ NO

4 Is this a **MICHIGAN** Severly Toxic waste? ☐ YES ☒ NO

5 Is this a **MICHIGAN** Toxic waste? ☐ YES ☒ NO

6 What is the pH of this waste? ☐ ≤2.0 ☐ 2.1-6.0 ☒ 6.1 - 9.0 ☐ 9.1 - 12.49 ☐ ≥ 12.5 ☐ NA

7 What is the flashpoint of this waste? ☐ < 90F ☐ 90F - 139F ☐ 140F-199F ☒ ≥ 200F ☐ NA

8 Is this a **UNIVERSAL** waste? ☐ YES ☒ NO

9 Does this waste contain reactive cyanide ≥ 250 ppm? ☐ YES ☐ NO

10 Does this waste contain reactive sulfides ≥ 500 ppm? ☐ YES ☒ NO

11 Does this waste contain any detectable PCBs? ☐ YES ☒ NO

12 Is this a **MICHIGAN** nonhazardous liquid industrial waste? ☒ YES ☐ NO

13 Is this waste for solidification? ☐ YES ☐ NO ☒ UNKNOWN

14 Is this waste for wastewater treatment? ☐ YES ☐ NO ☒ UNKNOWN

15 Is this waste a recoverable petroleum product other than Used Oil? ☐ YES ☒ NO

16 Is this waste a used oil as defined by 40 CFR Part 279? ☐ YES ☒ NO **IF YES FILL OUT BELOW**

OIL RECYCLING

OIL (%): _____ WATER (%): _____ SOLIDS (%): _____

Heat Value (BTU/lb): _____ Total Halogens: _____ ppm

The total halogens in the oil exceeds 1,000 ppm and I certify that the oil was not mixed with a hazardous waste.

Signature: _____

CERTIFICATION

I certify that all information (including attachments) is complete and factual and is an accurate representation of the known and suspected hazards, pertaining to the waste described herein. I authorize EnviroSolids, LLC to obtain a sample from any waste shipment for purposes of verification and confirmation. Generator agrees to indemnify and holds EnviroSolids, LLC harmless for any claims, liabilities, damages, and costs including, but not limited to, attorney's fees arising out of or in any way related to breach of the above certification by the Generator. I am a duly authorized representative of the Generator.

[redacted]

SUBMITTED BY:

ENVIROSOLIDS, L.L.C.

[redacted]

Site Name

[redacted]

Miscellaneous

Tax Number: 39XXXXX00 History...

No Number Because:

GPS Coordinates (provide five decimal places)

Latitude Coordinate: 42.47617

Longitude Coordinate: -82.98851

Collection Method: Lat/Long Interpolation

Receives All Waste?: No

Railroad?: No

Facility on Indian Reservation Land?: No

Utilization Activities:

Scrap Tires Activities:

Scrap Tires Acres:

NAICS Codes (up to four six-digit codes):

(The list of NAICS codes in WDS is based on the 2007 definitions provided by the U.S.Census Bureau.)

332812 - Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers

339999 - All Other Miscellaneous Manufacturing

Haz Waste Contact

First Name:	ERIC	**M.I.:**	R	
Last Name:	ROSENBERG			
Phone Number:	(586) 480-1701	**Ext:**		**Fax:**
Alternate Phone:				
Email Address:	erosenberg@pioneermetal.com			

Owner/Operator (6) | Activities (15) | Site ID Fees (1) | Comments (16)

[redacted]

Petitions (0) | Used Oil Biennial Reports (0) | Parcelling (0) | Institutional Controls (0) | Exemptions (0)

Name	Organization Type	Active Date	Inactive Date	Owner and/or Operator
[redacted]				

FINGERPRINT FORM

01320

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	3/16/18
Receiving ID#	
Manifest# Line:	
Land Ban Cert Included	Yes No
EGT Approval #	
[redacted]	
Transporter	M. Bro. Pros
Time In	
Time out	
Received by	PS
Sampled by	

LAB INFORMATION			
Compatible? (RT#) A-105	(Yes) (Liquid only) No	Barium	
PCBs (ppm)(Oily Waste Only)?	N/A	Calcium	
TOC (ppm)(CC Waste Only)?	N/A	Total Iron	
Flash Point (°F)	7140°F	Magnesium	
pH (S.U.)	2.2	Sodium Chloride	
Cyanides? (mg/L)	<30	Bicarbonate	
Sulfides? (ppm)	<200	Carbonate	
Specific Gravity	1.22 (Liquid)	TDS	
Physical Description	Liquid/sludge	Resistivity	
Stream Consistency	Yes (No)	Sulfate	
Oil in Sample	Yes (No)		
Temperature	66°F		
Conductivity	26mS		
% Solids	62%		
Turbidity	Yes No		
Color (visual)	light beige		
TSS (%)	75%		
Radiation Screen (as needed)	negative		
Lab Signature			

NON-PUMPABLE, SOLIDS

EnviroSolids, L.L.C.
6011 Wyoming Ave.
Dearborn, MI 48126
Phone 313-582-6032 Fax 313-582-1422

App # 01321

Generator Waste Profile

GENERATOR INFORMATION [redacted]

Shipping Volume: 3000 Gallons

Frequency: ☐ One Time Only ☐ Semi-Monthly ☐ Weekly ☒ Yearly ☐ Quarterly ☐ Monthly ☐ Daily ☐ Semi-Annual

DOT Shipping Name:
Non-RCRA, Non-Hazardous Liquid

Packaging: ☐ Bulk Solid (Yards³/tons) ☐ Drums/Totes ☐ Other (5 gal. pails, etc.)
☒ Bulk liquids (Gallons) ☐ CubicYard Boxes

PHYSICAL CHARACTERISTICS

Color: (describe) Colorless Odor: (describe) Mild

Accepted 03-21-18

Physical state at 70F (check all that apply)
☐ Solid ☒ Liquid ☐ Sludge ☐ Powder/Dust

Phases/Layers (check all that apply) ☒ Single ☐ Bi-Layered ☐ Multi-Layered

Physical Composition
% Oil <2% % Water >98% % Solids ____ % Sludge <2%

-0- VOCs

MATERIAL DESCRIPTION

Common Name of Waste: Tank #1 Soap

Provide a detailed description of the waste process generating this waste:
Chemicals are used to clean oil and other debris from sheet metal parts for the pre-treatment of powder coat paint process.

REGULATORY INFORMATION

Based upon RCRA waste regulations (40 CFR 261) and Michigan Act 451 Rules answer the following questions:

1 Is this an EPA RCRA listed hazardous waste (F, K, P, or U)?					☐ YES	☒ NO	
2 Is this an EPA RCRA characteristic hazardous waste (D001- D043)?					☐ YES	☒ NO	
3 Is this a MICHIGAN hazardous waste (other than RCRA)?					☐ YES	☒ NO	
4 Is this a MICHIGAN Severly Toxic waste?					☐ YES	☒ NO	
5 Is this a MICHIGAN Toxic waste?					☐ YES	☒ NO	
6 What is the pH of this waste?	☐ ≤2.0	☒ 2.1-5.0	☐ 5.1 - 9.0	☐ 9.1 - 12.49	☐ ≥ 12.5	☐ NA	
7 What is the flashpoint of this waste?	☐ < 90F	☐ 90F - 139F	☐ 140F-199F	☒ ≥ 200F	☐ NA		
8 Is this a UNIVERSAL waste?					☐ YES	☒ NO	
9 Does this waste contain reactive cyanide ≥ 250 ppm?					☐ YES	☒ NO	
10 Does this waste contain reactive sulfides ≥ 500 ppm?					☐ YES	☒ NO	
11 Does this waste contain any detectable PCBs?					☐ YES	☒ NO	
12 Is this a MICHIGAN nonhazardous liquid industrial waste?					☒ YES	☐ NO	029L
13 Is this waste for solidification?					☐ YES	☐ NO	☒ UNKNOWN
14 Is this waste for wastewater treatment?					☐ YES	☐ NO	☒ UNKNOWN
15 Is this waste a recoverable petroleum product other than Used Oil?					☐ YES	☒ NO	
16 Is this waste a used oil as defined by 40 CFR Part 279?					☐ YES	☒ NO	IF YES FILL OUT BELOW

OIL RECYCLING

OIL (%):_____ WATER (%):_____ SOLIDS (%):_____

Heat Value (BTU/lb):_____ Total Halogens:_____ppm

The total halogens in the oil exceeds 1,000 ppm and I certify that the oil was not mixed with a hazardous waste.

Signature:_____

CERTIFICATION

I certify that all information (including attachments) is complete and factual and is an accurate representation of the known and suspected hazards, pertaining to the waste described herein. I authorize EnviroSolids, LLC to obtain a sample from any waste shipment for purposes of verification and confirmation. Generator agrees to indemnify and holds EnviroSolids, LLC harmless for any claims, liabilities, damages, and costs including, but not limited to, attorney's fees arising out of or in any way related to breach of the above certification by the Generator. I am a duly authorized representative of the Generator.

[redacted]

SUBMIT VIA EMAIL

ENVIROSOLIDS, L.L.C.

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	3/21/18
Receiving ID#	
Manifest# Line:	
Land Ban Cert included	Yes No
[redacted]	
Client	Tank 1
Transporter	
Time in	
Time out	
Received by	PS
Sampled by	

Compatible? (RT#) based	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?	N/A	Calcium	
TOC (ppm)(CC Waste Only)?	N/A	Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	8.1	Sodium Chloride	
Cyanides? (mg/L)	<30	Bicarbonate	
Sulfides? (ppm)	<200	Carbonate	
Specific Gravity	1.00	TDS	
Physical Description	liquid	Resistivity	
Stream Consistency	(Yes) No	Sulfate	
Oil in Sample	Yes (No)		
Temperature	68°F		
Conductivity	9mS		
% Solids	4%		
Turbidity	(Yes) No		
Color (visual)	gold		
TSS (%)	<1%		
Radiation Screen (as needed)	negative		
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

Date	3/21/18
Receiving ID#	
Manifest# Line:	
Land Ban Cert Included	Yes No

[redacted]

Client	Tank 2
Transporter	
Time in	
Time out	
Received by	PS
Sampled by	

Compatible? (RT#)Acids	(Yes) No	Barium	
PCBs (ppm)(Oily Waste Only)?	N/A	Calcium	
TOC (ppm)(CC Waste Only)?	N/A	Total Iron	
Flash Point (°F)	>140°F	Magnesium	
pH (S.U.)	4.9	Sodium Chloride	
Cyanides? (mg/L)	<30	Bicarbonate	
Sulfides? (ppm)	<200	Carbonate	
Specific Gravity	1.00	TDS	
Physical Description	liquid	Resistivity	
Stream Consistency	(Yes) No	Sulfate	
Oil in Sample	Yes (No)		
Temperature	68°F		
Conductivity	2mS		
% Solids	2%		
Turbidity	(Yes) No		
Color (visual)	cloudy H2O		
TSS (%)	<1%		
Radiation Screen (as needed)	negative		
Lab Signature	PS		

[redacted]

BCI SURFACE TECHNOLOGIES
BULKCHEMICALS INCORPORATED

Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 05/03/2013 Reviewed on 04/16/2013

1 Identification of the substance/mixture and of the company/undertaking

· Product identifier

· Trade name: Zinga-Shield MS3

· Article number: MS3

· Details of the supplier of the safety data sheet
· Manufacturer/Supplier:
Bulk Chemicals Inc.
1074 Stinson Drive
READING, PA 19605
USA

· Information department:
Product safety department
info@bulkchemicals.us

· Emergency telephone number: CHEMTREC 1-800-424-9300, outside US +1-703-527-3887

2 Hazards identification

· Classification of the substance or mixture
Base additive

GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1

· Classification according to Directive 67/548/EEC or Directive 1999/45/EC

[redacted] Corrosive

Causes burns.

· Information concerning particular hazards for human and environment:
The product has to be labelled due to the calculation procedure of international guidelines.

· Classification system:
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· Label elements

· Labelling according to EU guidelines:
The product has been classified and marked in accordance with directives on hazardous materials.

· Code letter and hazard designation of product:

[redacted] Corrosive

(Contd. on page 2)

(Contd. of page 1)

· Risk phrases:
Causes burns.

· Safety phrases:
Keep locked up and out of the reach of children.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear suitable protective clothing, gloves and eye/face protection.
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
Dispose of this material and its container to hazardous or special waste collection point.

· Classification system:
· NFPA ratings (scale 0 - 4)

Health = 3
Fire = 0
Reactivity = 0

· HMIS-ratings (scale 0 - 4)

Health = 3
Fire = 0
Reactivity = 0

· Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures
· Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:			
12021-95-3	Hydroxyzirconium [illegible] 35%	Skin Corr. 1B, H314; Eye Dam. 1	1-<5%
112-34-5	2-(2-butoxyethoxy)ethanol	Eye Irrit. 2, H319	1-<2.5%

4 First aid measures

· Description of first aid measures
· General information: Immediately remove any clothing soiled by the product.
· After inhalation: In case of unconsciousness place patient stably in side position for transportation.
· After skin contact: Immediately wash with water and soap and rinse thoroughly.
· After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
· After swallowing: Drink copious amounts of water and provide fresh air. Immediately call a doctor.
· Information for doctors:
· Most important symptoms and effects, both acute and delayed
No further relevant information available.

(Contd. on page 3)

· Indication of any immediate medical attention and special treatment needed
No further relevant information available.
(Contd. of page 2)

5 Fire fighting measures

· Extinguishing media
· Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· Special hazards arising from the substance or mixture No further relevant information available.
· Advice for firefighters
· Protective equipment: Full firefighting gear and SCBA

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
· Environmental precautions: Do not allow to enter sewers/ surface or ground water.
· Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· Handling:
· Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· Information about protection against explosions and fires: No special measures required.
· Conditions for safe storage, including any incompatibilities
· Storage:
· Requirements to be met by storerooms and receptacles: No special requirements.
· Information about storage in one common storage facility:
Avoid application to metals such as zinc and aluminium
· Further information about storage conditions:
Protect from frost.
Store under lock and key and out of the reach of children.
Keep from freezing
Shelf life 1 year.
Keep receptacle tightly sealed.

(Contd. on page 4)

· Specific end use(s) No further relevant information available.

(Contd. of page 3)

8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7.

· Control parameters

· Components with limit values that require monitoring at the workplace

12031-95-2 Hydrated zirconia Acid 45%	
PEL	5 mg/m³ as Zr
REL	Short-term value: 10 mg/m³ Long-term value: 5 mg/m³ as Zr
112-34-5 2-(2-butoxyethoxy)ethanol	
TLV	NIC-67.5* mg/m³, NIC-10* ppm *inhalable fraction and vapor

· Additional information: The lists that were valid during the creation were used as basis.

· Exposure controls
· Personal protective equipment:
· General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· Breathing equipment:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

USA

Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 05/03/2013 Reviewed on 04/16/2013

Trade name: Zirca-Sil® MS3

· Eye protection:

Tightly sealed goggles

Faceshield

(Contd. of page 4)

9 Physical and chemical properties

· Information on basic physical and chemical properties
· General Information
· Appearance:
Form: Liquid
Color: Light yellow
· Odor: Odorless
· Odour threshold: Not determined.

· pH-value at 13.6 °C (68 °F): [redacted]

· Change in condition
Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 100 °C (212 °F)

· Flash point: [redacted]

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature:
Decomposition temperature: Not determined.

· Auto igniting: Product is not self-igniting.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:
Lower: Not determined.
Upper: Not determined.

· Vapor pressure at 20 °C (68 °F): 23 hPa (17 mm Hg)

· Density at 20 °C (68 °F): 1.016 g/cm³ (8.479 lbs/gal)
· Relative density Not determined.
· Vapour density Not determined.
· Evaporation rate Not determined.

· Solubility in / Miscibility with
Water: Fully miscible.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:
Dynamic: Not determined.
Kinematic: Not determined.

(Contd. on page 6)

Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 05/03/2013 Reviewed on 04/16/2013

Trade name: Zyvo-Sil® MS2

(Contd. of page 6)

12 Ecological information

· Toxicity
· Aquatic toxicity: No further relevant information available.
· Persistence and degradability No further relevant information available.
· Behavior in environmental systems:
· Bioaccumulative potential No further relevant information available.
· Mobility in soil No further relevant information available.
· Additional ecological information:
· General notes:
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value has negative effects on organisms. In the dilution of the use level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.
· Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods
· Recommendation:
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
· Uncleaned packagings:
· Recommendation: Disposal must be made according to official regulations.
· Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

· UN-Number
· DOT, ADR, IMDG, IATA UN1760
· UN proper shipping name
· DOT, IMDG, IATA [illegible]
· ADR 1760 CORROSIVE LIQUID, N.O.S. (Hydrofluoric Acid 4%)

(Contd. on page 8)

Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 05/03/2013 Reviewed on 04/16/2013

Trade name: Zirco-Sil® M83

(Contd. of page 7)

· Transport hazard class(es)

· DOT

· Class 8 Corrosive substances.
· Label 8

· ADR, IMDG, IATA

· Class 8 Corrosive substances
· Label 8

· Packing group
· DOT, ADR, IMDG, IATA II

· Environmental hazards:
· Marine pollutant: No

· Special precautions for user Warning: Corrosive substances
· Danger code (Kemler): 88
· EMS Number: F-A,S-B
· Segregation groups Acids

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

· UN "Model Regulation": UN1760, CORROSIVE LIQUID, N.O.S. (Hydrofluorozirconic Acid 45%), 8, II

15 Regulatory information

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

· Section 355 (extremely hazardous substances):
None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):
None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):
All ingredients are listed.

· New Jersey Right to Know:
None of the ingredients is listed.

(Contd. on page 9)

Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 05/03/2013 Reviewed on 04/16/2013

Trade name: Zirco-Sil® MSS

(Contd. of page 8)

· Pennsylvania Right to Know
None of the ingredients is listed.
· Proposition 65
· Chemicals known to cause cancer:
None of the ingredients is listed.
· Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.
· Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.
· Chemicals known to cause developmental toxicity:
None of the ingredients is listed.
· Carcinogenic categories
· EPA (Environmental Protection Agency)
None of the ingredients is listed.
· TLV (Threshold Limit Value established by ACGIH)
None of the ingredients is listed.
· NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients is listed.
· OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

· Product related hazard informations:
This product has been classified and marked in accordance with directives on hazardous materials.

· Hazard symbols:

Corrosive

· Risk phrases:
Causes burns.

· Safety phrases:
Keep locked up and out of the reach of children.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear suitable protective clothing, gloves and eye/face protection.
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
Dispose of this material and its container to hazardous or special waste collection point.
· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

(Contd. on page 10)

Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 05/03/2013 Reviewed on 04/16/2013

Trade name: Zircs-SIO MS3

(Contd. of page 9)

· **Department issuing MSDS:**
Environmental,
Safety and Health
· **Contact: MSDS Coordinator**
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)

BCI SURFACE TECHNOLOGIES
BULK CHEMICALS INCORPORATED
1074 Stinson Drive • Reading, PA 19605
p: 800-338-2655 • 610-926-4128 f: 610-926-8125
www.bulkchemicals.us • info@bulkchemicals.us

LABORATORY REQUEST/REPORT

[redacted]

SERVICE REQUESTED: Send samples to a certified laboratory for fats, oil and grease analysis.

REPORT AND CONCLUSIONS:

Analysis: The submitted samples were sent to RTI Laboratories for a certified fats, oil and grease analysis per EPA method 1664A. The results of testing are as follows:

RTI LABORATORIES, INC.

RTI Laboratories
[redacted]
Livonia, MI 48150
TEL: (734) 414-9000
Website: www.rtilab.com

Thursday, February 08, 2018

[redacted]

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

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Quality control data is within laboratory defined or method specified acceptance limits except if noted.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Jeannine Meyers

Project Manager

RTI Laboratories, Inc. - Workorder Sample Summary

WO#: 1801843
Date Reported: 2/8/2018
Original

[redacted]

Lab Sample ID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1801843-001A	Stage 1 Sat Solution Point A		1/9/2018 1:00 PM	1/20/2018 4:44 PM	Liquid
1801843-002A	Stage 2 Zero Cal MSS Solution Point A		1/9/2018 1:15 PM	1/20/2018 4:44 PM	Liquid

RTI Laboratories, Inc. - Case Narrative

WO#: [illegible]

Date Reported: [illegible]

Original

[redacted]

Concentrations reported with a J flag in the Qual field are values below the reporting limit (RL) but greater than the established method detection limit (MDL). There is greater uncertainty associated with these results and data should be considered as estimated. These analytes are not routinely reviewed nor narrated below due to their potential for being laboratory artifacts.

Concentrations reported with an E flag in the Qual field are values that exceed the upper quantification range. There is greater uncertainty associated with these results and data should be considered as estimated.

All sample analyses included a Method Blank, LCS/LCSD, MS/MSD, Duplicates, post digestion spikes, serial dilutions, and all method specified quality control, as applicable. All QC parameters were within established control limits except where noted on the QC report and/or below. Initial and continuing calibration results were within method specifications, except as noted below.

Pesticide and PCB analysis clarifications

Organochlorine Pesticides: Surrogates were not evaluated for CCV and CRDL samples for Chlordane and Toxaphene. Chlordane and Toxaphene are not present in the LCS, MS and MSD spiking solution.

Polychlorinated Biphenyls (PCB): The spiking solutions only contain the peaks for Aroclors 1016 and 1260.

Any comments or problems with the analytical events associated with this report are noted below.

Sample Receipt

Receipt No. 1: Samples were received at the RTI Laboratories, Inc. via RTI delivery on [illegible]. Total number of samples received are 2.

Sample Analysis

Samples were analyzed at the RTI Laboratories, Inc. for:

Oil and Grease - EPA1664A

Sample Analysis

Samples were analyzed at the RTI Laboratories

Oil and Grease - EPA1664A

RTI Laboratories, Inc. - Analytical Report

WO#: 1801643

Date Reported: 2/8/2018

Original

[redacted]

	Result	RL	Qual	Units	DF	Date Analyzed
Oil and Grease		**Method: EPA1664A**				**Analyst: HS1**
Oil & Grease, Total	450	5.0		mg/L	1	2/6/2018 6:45 AM

RTI Laboratories, Inc. -Analytical Report

WO#: 1901543

Date Reported: 2/7/2019

Original

[redacted]

Analysis	Result	RL	Qual	Units	DF	Date Analyzed
Oil and Grease		Method: EPA1664A				Analyst: NS1
Oil & Grease, Total	ND	5.0		mg/L	1	2/1/2019 8:49 AM

RTI Laboratories, Inc. - DATES REPORT

WO#: 1901643

Date Reported: 2/4/2019

[redacted]

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Estimate Date	Prep Date	Analysis Date
1901643-001A	Stage 1 Brine Solution Field A	1/31/2019 1:30 PM	Liquid	EPA_1664A-Oil and Grease		2/1/2019 8:55 AM	2/1/2019 9:45 AM
1901643-002A	Stage 2 Brine Solution Field A	1/31/2019 1:15 PM	Liquid	EPA_1664A-Oil and Grease		2/1/2019 8:55 AM	2/1/2019 9:45 AM

RTI Laboratories, Inc. - QC SUMMARY REPORT WO#: 1801843

[redacted]

Sample ID:	MBLK-21118	Samp Type:	MBLK	Test Code:	EPA_1664A	Units:	mg/L	Prep Date:	2/7/2018	RunNo:	100437	
Client ID:	PBW	Batch ID:	R100437	TestNo:	1664A			Analysis Date:	2/7/2018	SeqNo:	1999357	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil & Grease, Total		ND	5.0									

Sample ID:	LCS-21119	Samp Type:	LCS	Test Code:	EPA_1664A	Units:	mg/L	Prep Date:	2/7/2018	RunNo:	100437	
Client ID:	LCSW	Batch ID:	R100437	TestNo:	1664			Analysis Date:	2/7/2018	SeqNo:	1999358	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil & Grease, Total		33	5.0	40.00	0	83.5	78	114				

Sample ID:	LCSD-21119	Samp Type:	LCSD	Test Code:	EPA_1664A	Units:	mg/L	Prep Date:	2/7/2018	RunNo:	100437	
Client ID:	LCSSD	Batch ID:	R100437	TestNo:	1664			Analysis Date:	2/7/2018	SeqNo:	1999359	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil & Grease, Total		32	5.0	40.00	0	80.0	78	114	33.50	3.95	18	

RTI Laboratories, Inc. - Definitions and Acronyms

WO#: 1801643

Date Reported: 2/8/2018
Original

DEFINITIONS

DF: Dilution factor, the dilution factor applied to the prepared sample.

DUP: Duplicate; aliquot of a sample taken from the same container under laboratory conditions and processed and analyzed independently, used to calculate Precision (%RPD).

LCS: Laboratory Control Sample prepared by adding a known amount of target analytes to a specified amount of clean matrix and prepared with the batch of samples, used to calculate Accuracy (%REC).

LCSD: A duplicate LCS sample, used to calculate both Accuracy (%REC) and Precision (%RPD).

MBLK: Method blank sample of similar matrix that does not contain target analytes or interferences [illegible] and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedure, used to assess and verify that the [illegible].

MDL: Method Detection Limit. The lowest concentration of analyte that can be detected by the method in the applicable matrix.

Mg/Kg or mg/L: Units of parts per million (PPM)—milligram per Kilogram (mg/kg) or milligram per Liter (mg/L).

MS: Matrix Spike prepared by adding a known amount of target analytes to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available, used to calculate Accuracy (%REC).

MSD: A duplicate MS sample, used to calculate both Accuracy (%REC) and Precision (%RPD)

%REC: Percent Recovery of a known spike (SPK); a measure of accuracy expressed as a percentage of a measured (recovered) concentration compared to the known concentration (SPK) added to the sample. This is compared to the Low Limit and High Limit.

%RPD: Relative Percent Difference; a measure of precision expressed as a percentage of the difference between two duplicate results to the average concentration. This is compared to the RPD Limit.

PL: Permit Limit; Not included on all reports. Used primarily for wastewater discharge permits.

PQL: Practical Quantitation Limit; The lowest useful limit to which data is quantified during routine operations. Analyte concentrations below PQLs are reported either as ND or as a number with a "J" qualifier.

Qual: Qualifier that applies to the analyte reported.

RL: Reporting Limit. See PQL.

SPK: Spike amount in the QC section for both SPK Value and SPK Ref Val

Ug/Kg or ug/L: Units of parts per billion (PPB)—microgram per Kilogram (ug/kg) or microgram per Liter (ug/L).

QUALIFIERS

*DL: Reported value exceeds the maximum allowed concentration by regulation or permit

B: Analyte detected in the associated Method Blank at a concentration > RL.

E: Analyte concentration reported that exceeds the upper calibration standard. Greater uncertainty is associated with this result and data should be considered estimated.

H: Holding time for preparation or analysis has been exceeded

J: Analyte concentration is reported, and is less than the PQL and greater than or equal to the established MDL. Greater uncertainty is associated with this result and data reported is estimated. These analytes are not routinely reviewed nor checked as to their potential for being false positive results.

M: Manual integration used to determine area response

ND: Analyte concentration is less than the Reporting Limit.

P: Second column RPD exceeds 40%

R: % RPD exceeds control limits

S: % REC exceeds control limits

T: [illegible] greater than [illegible] of the LCS

U: The analyte concentration is less than the DL.

CHEMIST: Diana L. Anthony

DATE: February 8, 2018

PROJECT COST: $ 200^{00}

COST TO CUSTOMER: No Charge

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard 29CFR 1910. 1200. Standard must be consulted for specific requirements.

IDENTITY (As used on label and list): BULK SOL™ 3

SECTION 1

[redacted]

HMIS Ratings: Health 1, Flammability 1, Reactivity 0

SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY

Hazardous Component(s) (chemical & common name(s))	CAS NO.	OSHA PEL	ACGIH TLV	OTHER
2-Butoxyethanol	111-76-2	25 ppm	25 ppm	N/D
Water	7732-18-5	N/A	N/A	N/A
Modified Polyethoxy lated Alcohol	Proprietary	N/D	N/D	N/D

SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS

Boiling Point: >200 F
Vapor Pressure: N/D
Melting Point: N/A
Solubility in Water: 100%
Appearance and Odor: Colorless liquid, mild odor

Specific Gravity: (H20=1): 1.00
Vapor Density: N/D
Evaporation Rate (H20=1): 1
Reactivity in water: None

SECTION 4 - FIRE & EXPLOSION DATA

Flash Point: 150 F
Flammable Limits: N/D

Method Used: TCC ASTM D-56
Auto-Ignition Temperature: N/D

Extinguisher Media: CO2, dry chemical, alcohol or all purpose foam, water spray

Special Fire Fighting Procedures: Wear self-contained breathing gear when fire fighting in confined spaces.

Unusual Fire and Explosion Hazards: None

SECTION 5- PHYSICAL HAZARDS (REACTIVITY DATA)

Stability: Stable
Conditions to Avoid: None
Incompatibility (Materials to Avoid): Strong oxidizers, strong alkali.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide

Hazardous Polymerization: Will Not Occur
Conditions to Avoid: None

SECTION 6 - HEALTH HAZARDS

Acute: Irritation
Chronic: None known

Signs and Symptoms of Exposure:
SKIN: May cause irritation and swelling.
INHALATION: May irritate respiratory tract, may cause nausea, faintness, and/or headache which is transient.
INGESTION: May cause headaches, dizziness, in coordination, nausea, vomiting, diarrhea, & general weakness.
EYES: May cause irritation and possible corneal injury.

Medical Conditions Generally Aggravated by Exposure: Dermatitis kidney and liver diseases.

Chemical Listed as a Carcinogen or Potential Carcinogen:
National Toxicology Program: No
IARC Monographs: No
OSHA: No

Emergency and First Aid Procedures:
INGESTION: Give 2 glasses of water and induce vomiting. Get medical help.
EYES: Irrigate for 15 minutes and get medical attention.
INHALATION: Remove from contaminated area.
SKIN: Wash with soap and water.

Routes of Entry:
Skin: May occur from handling of material.
Eyes: May occur from splashing or vapors.
Inhalation: May occur from vapors.
Ingestion: May occur from indirect contact.

SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be taken in Handling and Storage: Warning: Harmful if absorbed through skin. Keep away from heat and flames. Keep container closed.
Other Precautions: Wash thoroughly after handling.

Steps to be Taken In Case Material is Released or Spilled: Dike spill and collect for disposal. Small spills can be flushed with large amounts of water.

Waste Disposal Methods (Consult federal, state, and local regulations): Incinerate where allowed or dispose to a landfill.

SECTION 8 - SPECIAL PROTECTION INFORMATION/CONTROL MEASURES

Respiratory Protection: If needed.
Ventilation: Local exhaust usually adequate. Keep exposure below TLV.

Protective Gloves: Rubber
Eye Protection: Chemical splash goggles
Other Protective Clothing or Equipment: Chemical apron, eye bath, safety shower.
Work/Hygienic Practices: Wash with soap and water after handling. Avoid unnecessary contact.

SECTION 9 - D.O.T. INFORMATION

This product is considered to be a non-hazardous material and is not regulated by the D.O.T.

N/A - Not Applicable < Less Than
N/D - Not Determined > Greater Than

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.