

June 22, 2020

Mr. Allan Batka
United States Environmental Protection Agency
Region 5 (WU-16J)
77 West Jackson Blvd.

Re: RIES Monthly Report

Dear Mr. Batka:

Republic Industrial and Energy Solutions, LLC hereby submits its seventy-eighth Monthly Report ("MR") in conformance with the requirements of its two EPA UIC permits (#s MI-163-1W-C010 & MI-163-1W-C011).

REIS 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. As in the last few months, there are computerized tabulated sheets absent from this report because the computer systems continue to be upgraded. These sheets will be reinstated into this report once the report generator programming is complete. REIS did not accept any F039 waste in April 2020 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 supervision and interaction with the persons who manage and operate the system, and those persons responsible for the collection of the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

We trust that you find this report satisfactory, however, if you have any questions or comments, please feel free to contact us.

Sincerely,

John/Frost

cc: Nicole Rudolph (Republic Services)

AVERAGE INJECTION RATE

Calculation of Average Injection Rate

CURRENT REPORTING YEAR	2020
CURRENT REPORTING MONTH	April
Date (month, year) of the first injection	on into either well at the Citrin Road Facility
NOV 2013	

CURRENT MONTH (all volumes in gallons)

	Injected Waste	Injected Non-Waste	Total injected
MI-163-1W-C010 , Well #1-12			
Current Month	25,507	0	25,507
Since facility first injected			14,593,472
MI-163-1W-C011, Well #2-12			
Current Month	0	.0	0
Since facility first injected			4,648,763
. /		Lifetime Combined	19,242,235

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 76
lifetime number of months of injection \times 43,830 minutes/month $= 3,331,280 \text{ minutes of injection}$
Lifetime combined injected volume

WELL 1 DATA

DATA DESCRIPTION

In the month of April, the were 2 loads of leachate received and 25,507 gallons of waste injected was cleaning waters and some injection well return liquids from the well 1 and well 2 workovers. There is no tabulated data in this report because the SCADA operating system continues to be upgraded and rebuilt. Currently the trend screens are working, and the tabulated data reports will be incorporated in the next month's report.

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 x0)

Chart Recorder #3

Channel #1

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

Channel #2

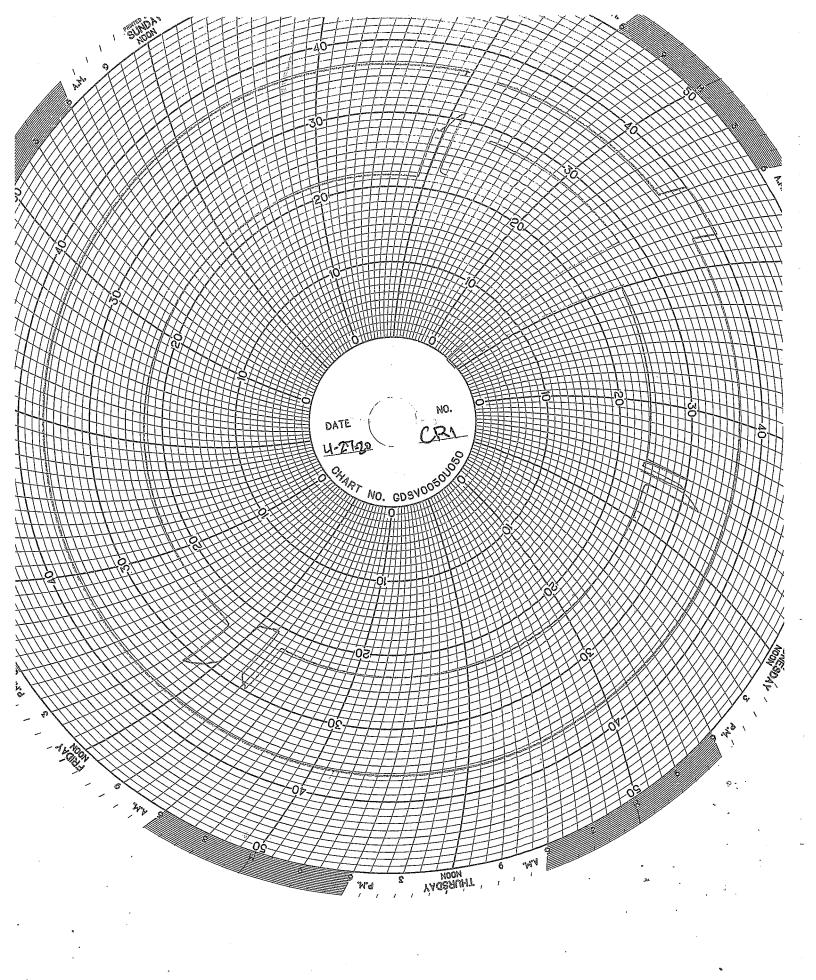
Red Pen - Well 1 Monthly Volume (chart value x 100,000)

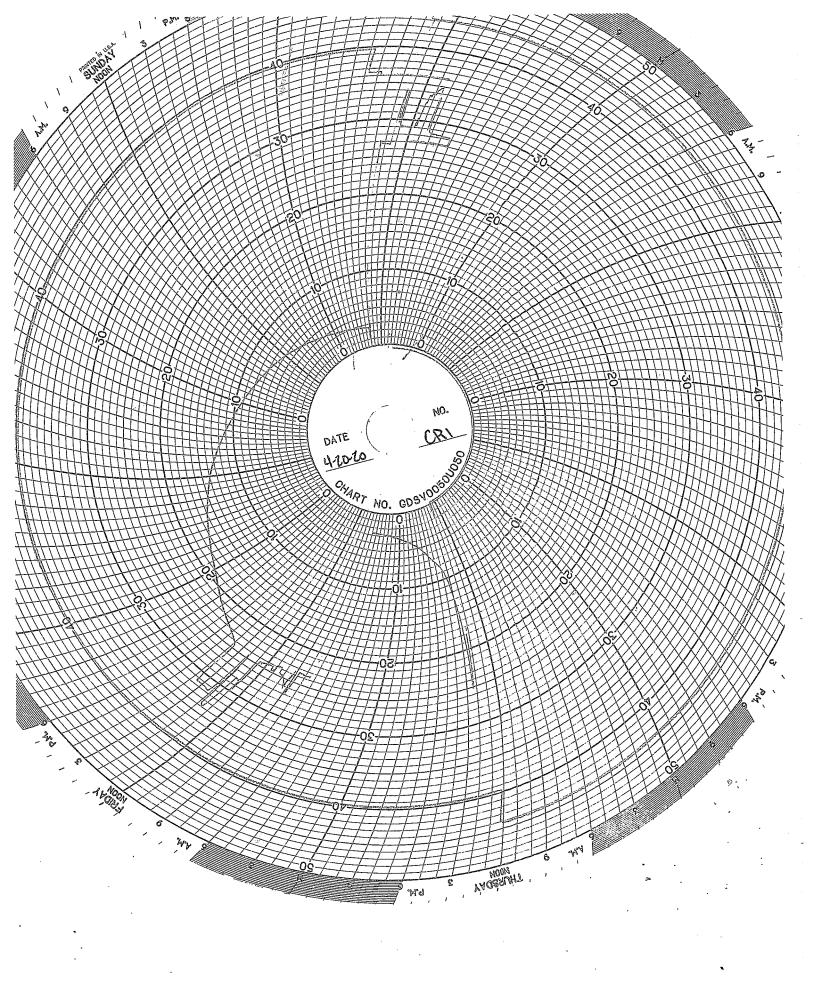
Channel #3

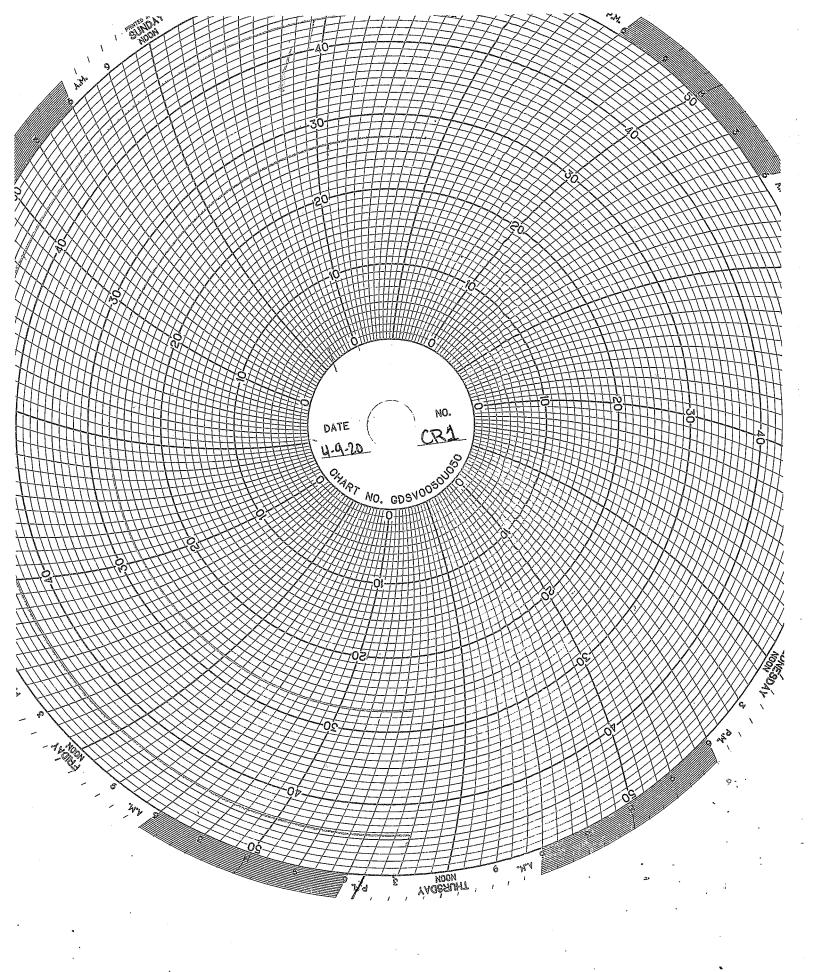
Green Pen - Well 2 Monthly Volume (chart value x 100,000)

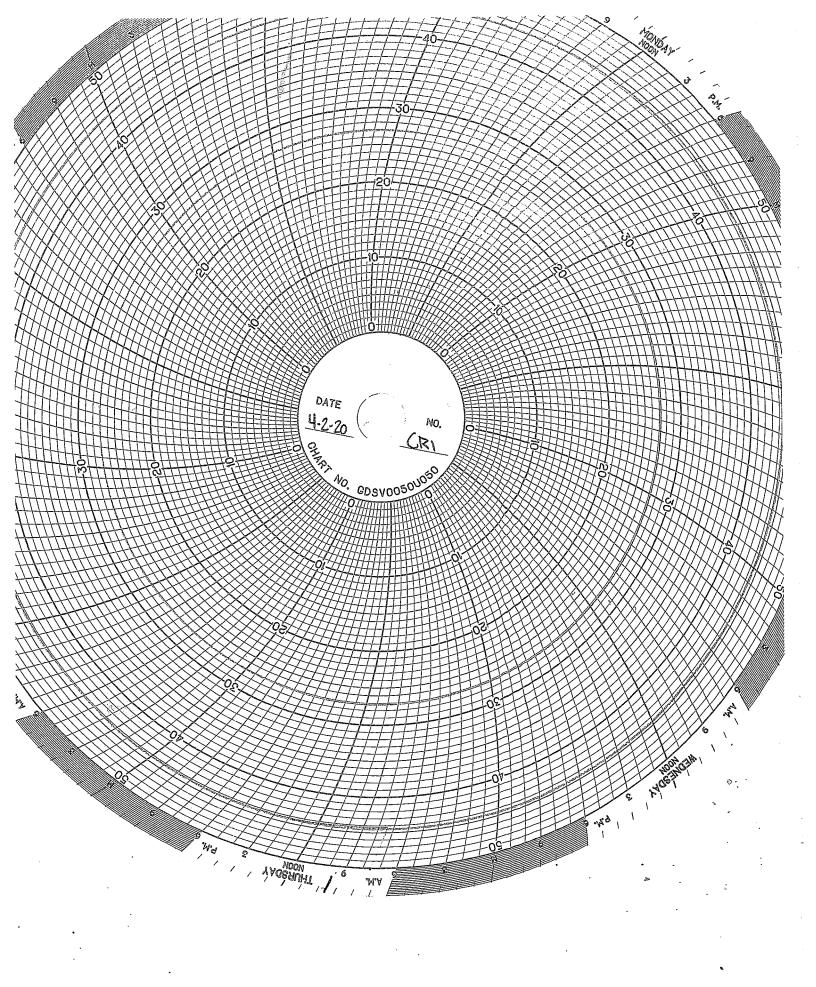
Channel #4

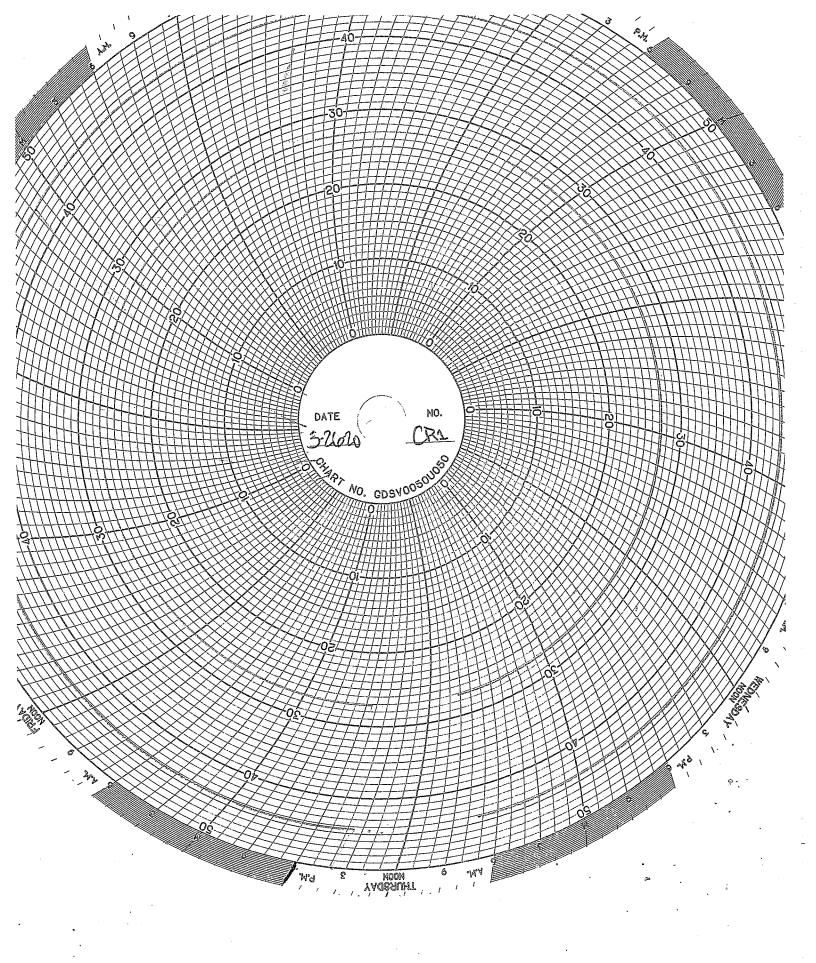
Black Pen - Temperature (chart value x 0)











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 x0)

Chart Recorder #3

Channel #1

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

Channel #2

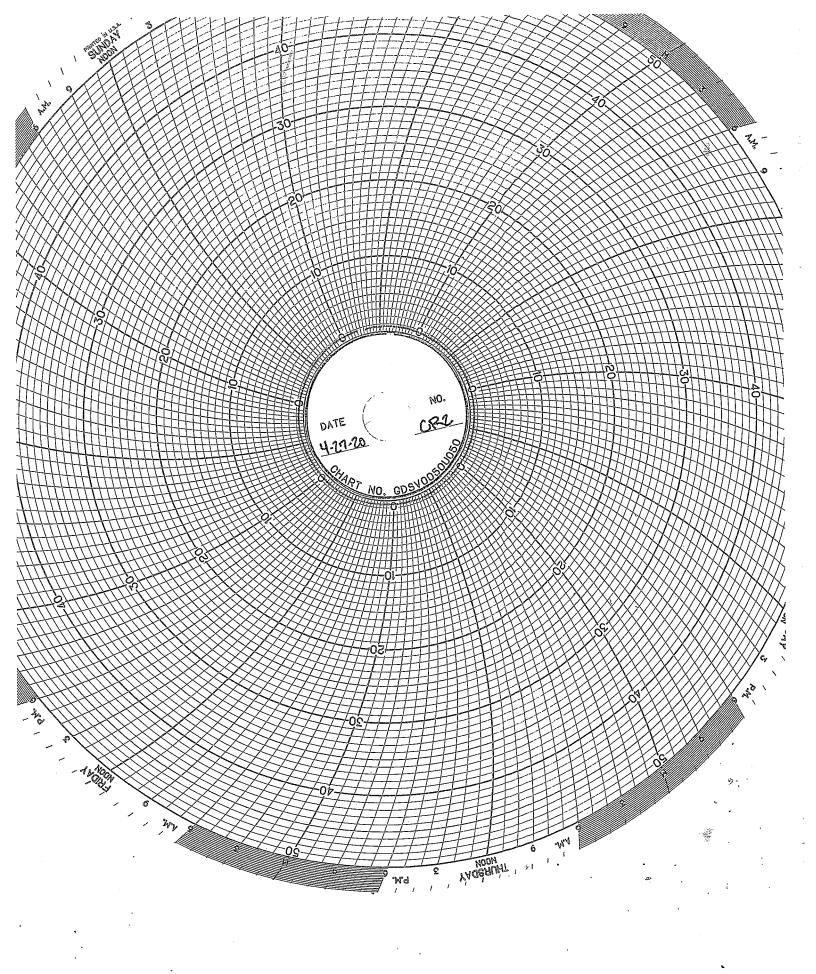
Red Pen - Well 1 Monthly Volume (chart value x 100,000)

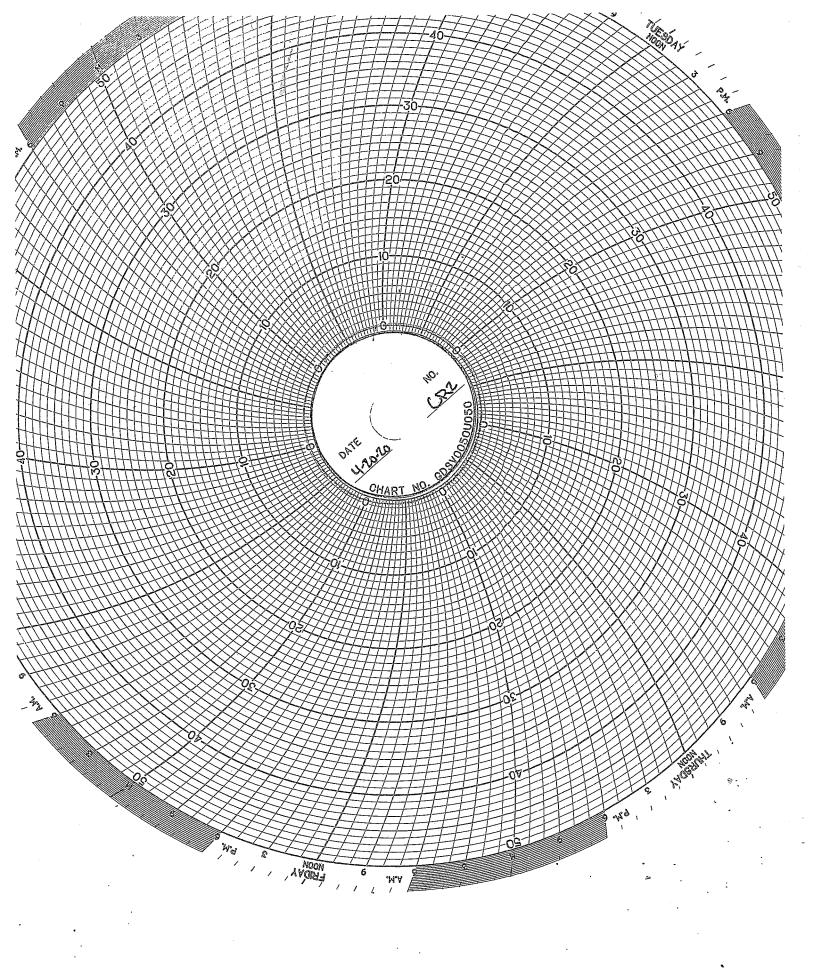
Channel #3

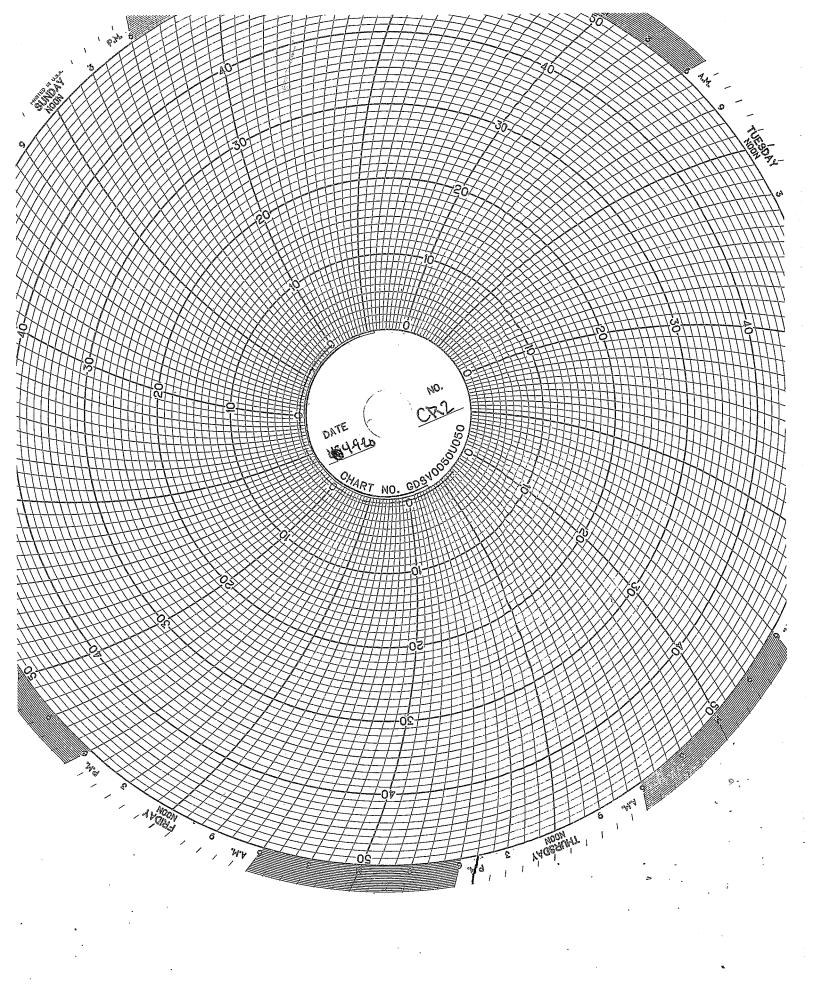
Green Pen - Well 2 Monthly Volume (chart value x 100,000)

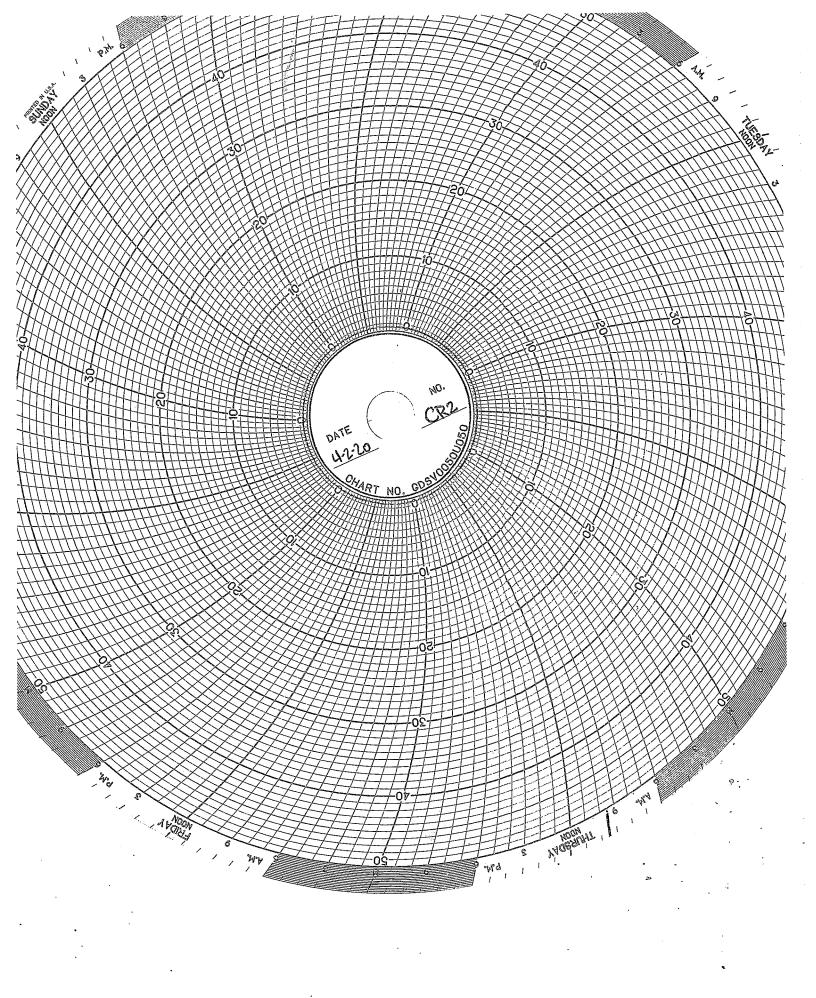
Channel #4

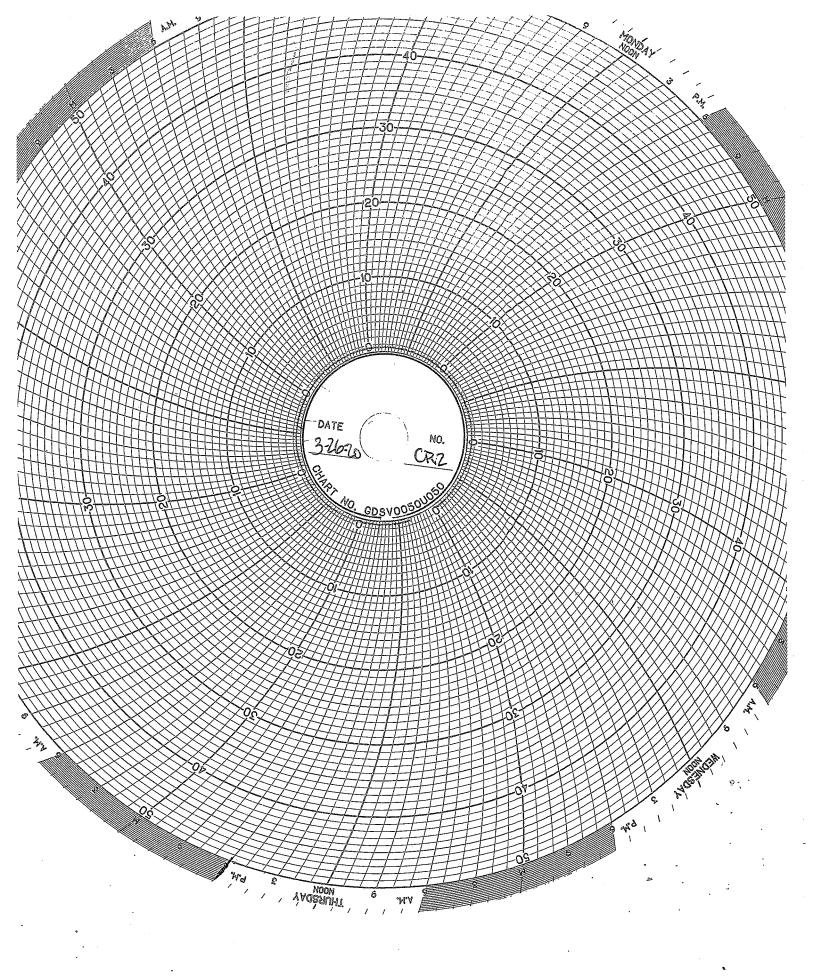
Black Pen - Temperature (chart value x 0)

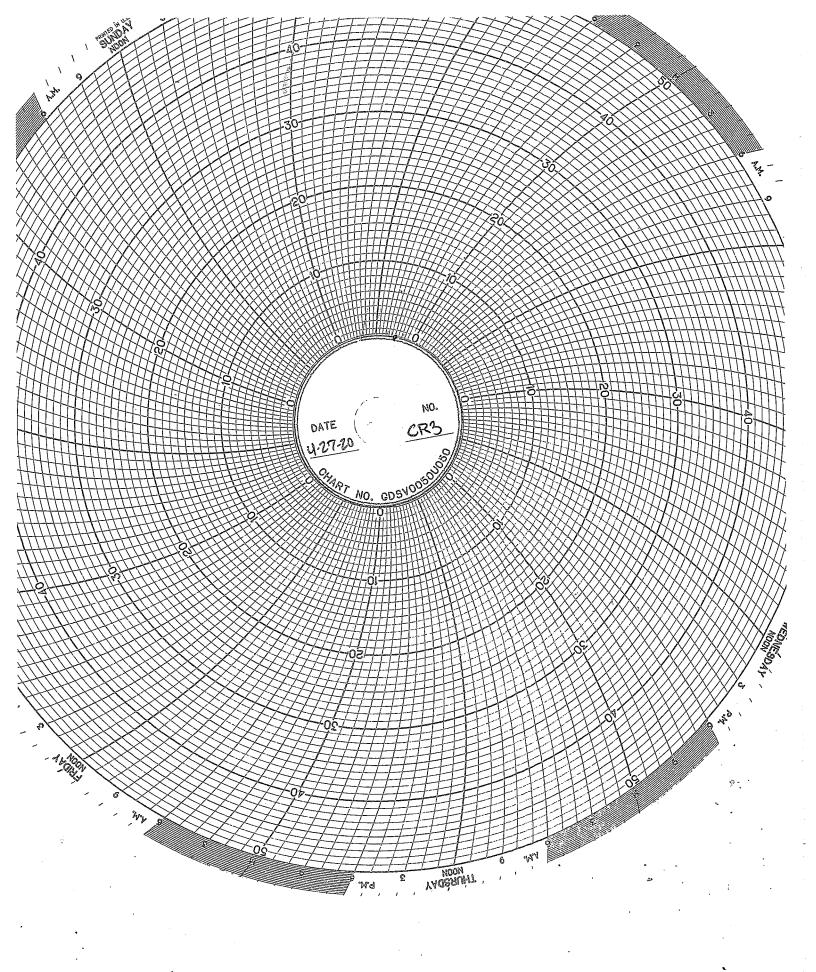


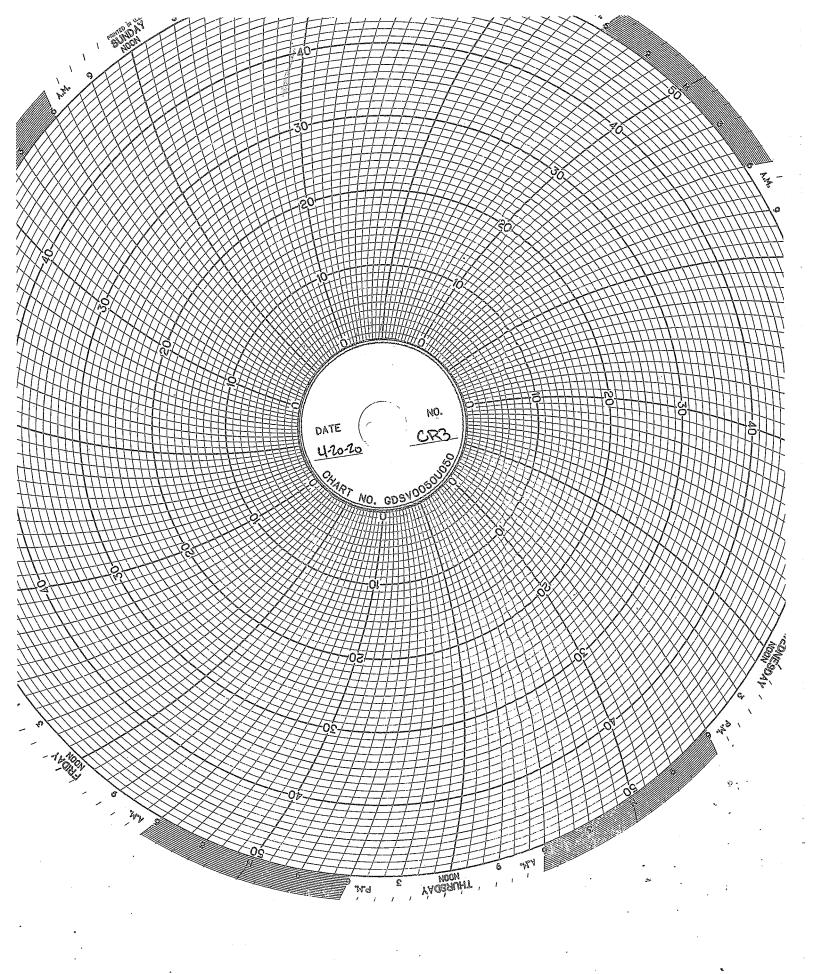


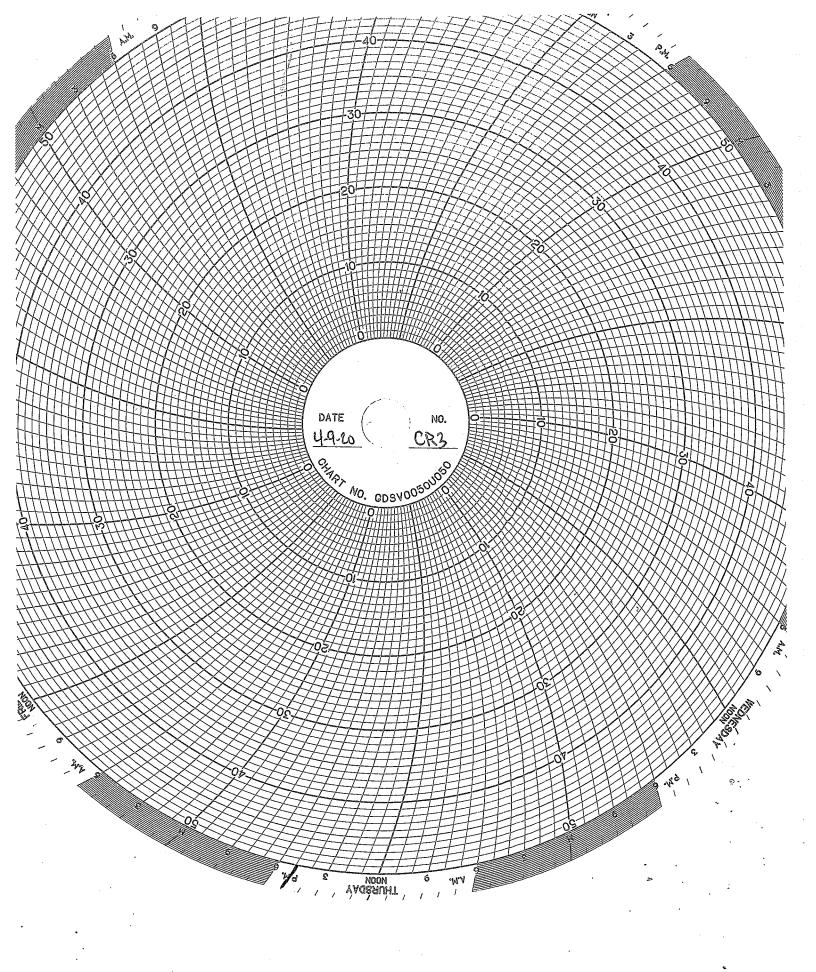


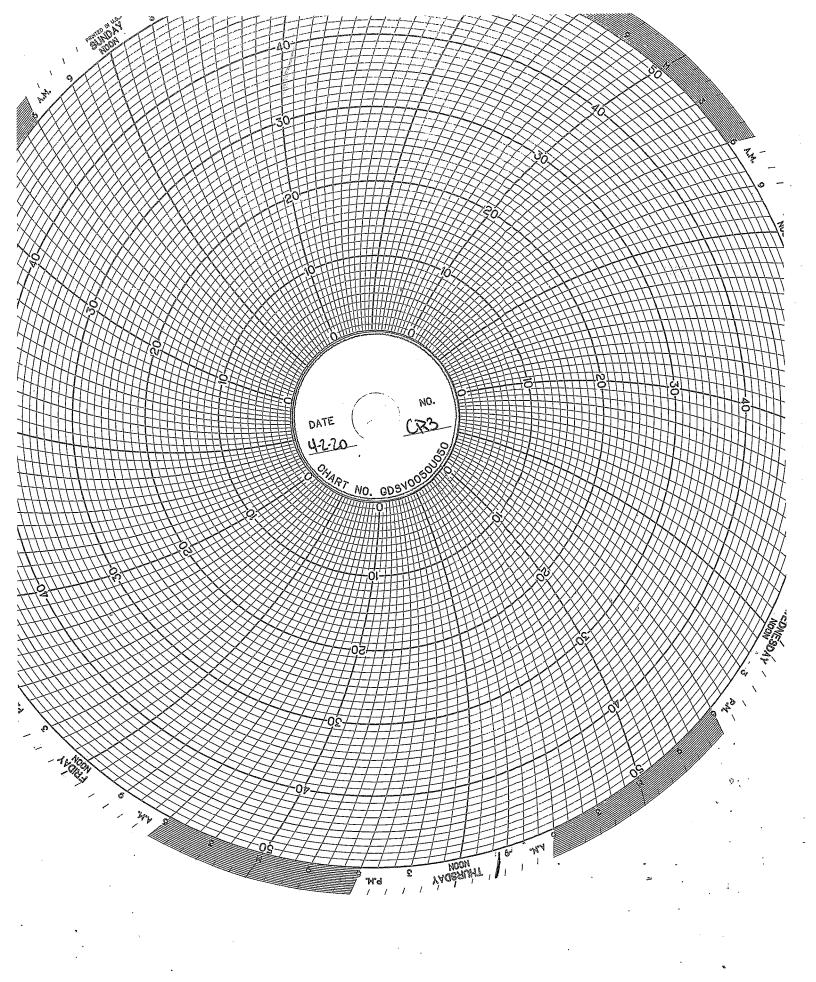


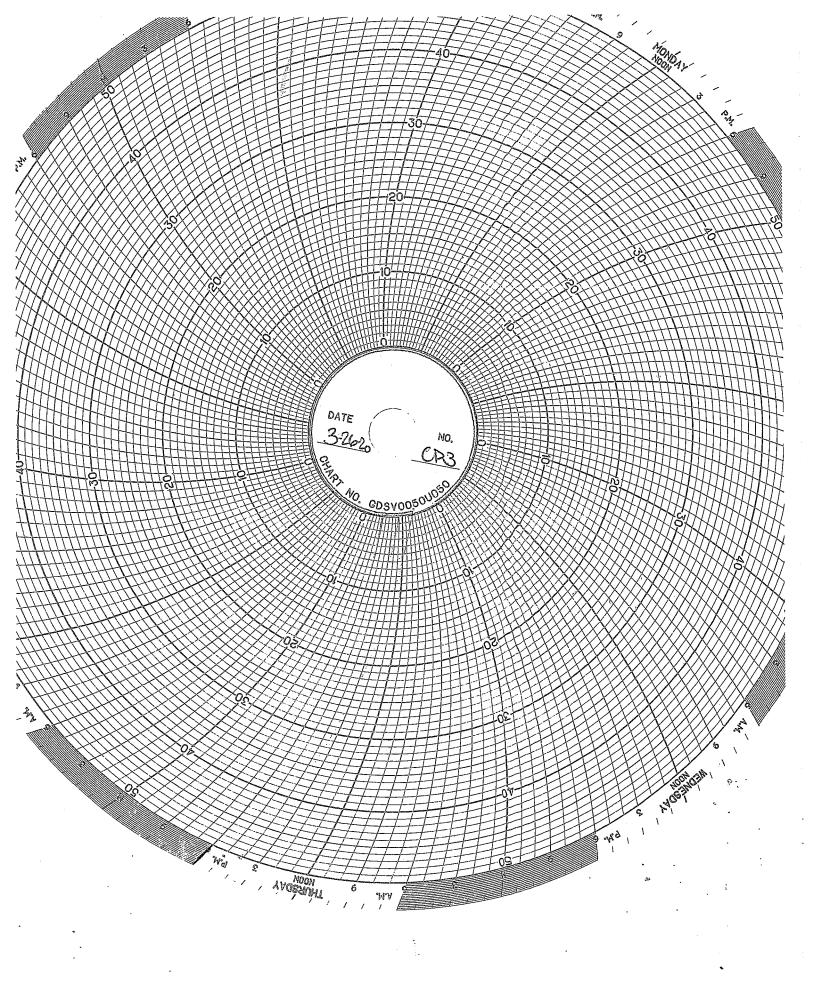












CORROSION MONITORING

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.

COOROSION MONITORING PLAN COUPON SUMMARY

Date	Hasteloy	Stainless Steel	Fiberglass	
1/16/2020 2/6/2020 3/3/9/20	13.326 g 13.326 g 13.326 g	10.840 g 10.836 g 10.842 g	18.033 g 18.034 g 18.034 g	Well 1 workover new well
4/9/2020	13.328 g	10.839 g	18.037 g	



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 Diummond, Sr.

Physical & Plastic Testing, Manager

A Testing Lab

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

ISO 9001:2008 Registered

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Progress Through Innovation, Technology and Customer Satisfaction

October 22, 2015

John Frost Environmental Geo-Technologies, LLC Page 2 of 2 PN 125322

SUBJECT:

Barcol Hardness on one material.

RECEIVED:

One small section identified as; Fiberglass Coupon.

BARCOL HARDNESS ASTM D 2583-13a

Instant Reading

Results

Barcol Hardness, Instant

96

Prepared By:

Melissa Martin

∕Sr. Project Technician

tc

Scott W. Yates
Plastics Testing Assistant Manager

Approved By:



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

Melissá Martin Senior Project Technician

Rev 041916

Approved By:

Jim Diummond

Physical Testing, Manager

An A2LA ISO 17025 Accredited Testing Laboratory — Certificate Numbers 255:01 & 255:02 ISO 9001:2008 Registered

ISO 9001:2008



Progress Through Innovation, Technology and Customer Satisfaction

December 12, 2016

John Frost Environmental Geo-Technologies, LLC Page 2 of 2 PN 132662

SUBJECT:

Barcol Hardness on one (1) material.

RECEIVED:

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

BARCOL HARDNESS ASTM D 2583-13a

Instant Reading

RESULTS

Barcol Hardness, Instant

96

Prepared By:

Melissa Martin Senior(Project Technician

Approved By

Scott Yates

Plastics Testing, Assistant Manager

wk

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



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 041916



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

ISO 9001:2008

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Progress Through Innovation, Technology and Customer Satisfaction

December 13, 2017

John Frost Environmental Geo-Technologies, LLC Page 2 of 2 PN 139140

SUBJECT:

Barcol Hardness on one material.

RECEIVED:

One small section identified as; Fiberglass Coupon.

BARCOL HARDNESS ASTM D 2583-13a

Instant Reading

Results

Barcol Hardness, Instant

96

Prepared By

Melissa Martin Sr Project Technician Approved By

Scott Yates

Plastics Testing, Assistant Manager

sc

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

20450 HARPER AVENUE HARPER WOODS, MI 48225 PHONE (313) 885-3585 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

<u>Hardness</u>

Specimen 1

90

Specimen is being returned with this report for further evaluation.

M. W. Ghesquiere

President

MWG/kni

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TOTAL

20450 HARPER AVENUE HARPER WOODS, MI 48225 PMONE (913) 885-3535 FAX (913) 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 Mardness 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

只有可能是否。1.4. 在1.6. 在1.6.

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

PS 7 特点 GROSTES 2015 (1915年)

CHESONIERE DEASTIC TESTING, INC

CONTRACTOR CONTRACTOR SHAREFOR AREA

M. W. Shesquiere

President

MWG/dm

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TOTAL 1 PAGES
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Samples, exira and related test materials will be destroyed 30 days after the date of the final report unless the often indicates otherwise in writing.

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

→ Meilssa Martin Sr. Project Technician oproved By:

Jim Drummond

Physical & Plastics Testing, Manager

ACCREDITED
A Testing Leb

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

ISO 9001:2008

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Testing. Development. Problem Solving.

October 2, 2014

John Frost Environmental Geo-Technologies, LLC Page 2 of 2 PN118325

SUBJECT:

Barcol Hardness on one material.

PO# Attn; John Frost

RECEIVED:

One small section identified as; Fiberglass Coupon.

BARCOL HARDNESS ASTM D 2583-13a

Results

Barcol Hardness, Instant

97

Prepared By

SÉ

/ Welissa Vartin

Sr. Project Technician

Approved By:

Scott W. Yates

Plastics Testing Assistant Manager

MAINTENANCE

UIC Monthly Maintenance Log

This month the Hydra*cell injection pump number 1 was pulled out and sent to a pump vendor for evaluation. The pump output was reduced by almost 50% and likley needs some repairs or a rebuild.

INJECTION FINGERPRINTS

RECEIVING & APPROVAL FORM

RECEIVING INFO	DRMATION 4.20
Receiving ID#	T04242001
Manifest# Line	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	JKF
Sampled by	JKF

H		
LAB INFORMA	TION	
Compatible? (RT#)	YES	: (
PCBs (ppm) (Oily Waste		•
Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	>KO°F	-
pH (S.U.)	Z.S_	
Cyanides? (mg/L)		. <u> </u>
Sulfides? (ppm)?		
Specific Gravity	1.02	
Physical Description	ورود و المستور و	
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	67°F	
Conductivity	42.80	5
% Solids	A Company of the Comp	
Turbidity	Yes	No
Color		name of the same o
TSS (%)	<0.1	
Radiation Screen (as needed)	1	
Lab Signature/Initials	16.50	
-rap olynamic/minals	- Samon Color	

RECEIVING & APPROVAL FORM

RECEIVING INFO	Tarle .		
Date	4.29.	4.29.20	
Receiving ID#	TOUZ9	T04292001	
Manifest# Line			
Land Ban Cert included	Yes	No	
EGT Approval #			
Generator			
Client			
Transporter			
Time in		<u></u>	
Time out		<u> </u>	
Received by	15	es man o es	
Sampled by	JF.		

Section 1997 to the section of the s	HORSe Control of the	PARAMANAGER ANGER
LAB INFORMAT	ION :	
Compatible? (RT#)	V&55	
PCBs (ppm) (Oily Waste		
Only)?	 	
TOC ppm (CC Waste Only)?		
Flash Point (F)	>140°F	. <u>6</u>
pH (S.U.)	3.1	A CONTRACTOR
Cyanides? (mg/L)		- 17-, - 1
Sulfides? (ppm)?		
Specific Gravity	1.67	
Physical Description	and the second of the second o	<u>=</u>
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	-65°F	<u> </u>
Conductivity	130.4	и <u>S</u>
% Solids	9.676	>
Turbidity	Yes	No
Color	and the second s	
TSS (%)	Z.0%	>
Radiation Screen (as needed)		
Lab Signature/Initials	Johns	1485
The same of the sa		6

WASTE PROFILES