

April 30, 2020

Mr. Allan Batka
United States Environmental Protection Agency
Region 5 (WU-16J)
77 West Jackson Blvd.
Chicago, Illinois 60604

Re: RIES Monthly Report (in conformance with MI-163-1W-C010 & MI-163-1W-C011)

Dear Mr. Batka:

Republic Industrial and Energy Solutions, LLC. ["RIES", formerly Environmental Geo-Technologies, LLC ("EGT")] hereby timely submits its seventy-seventh Monthly Report ("MR") in conformance with the requirements of its two EPA UIC permits (#s MI-163-1W-C010 & MI-163-1W-C011).

RIES 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 for the last few months, there are a few computerized sheets absent from this report because the computer systems continue to be upgraded, and once completed, I will forward them (for September, October, November, December 2019, January, February and March 2020 summary sheets) on to you. RIES did not accept any F039 waste in March, 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 inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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

Sincerely,

Richard J. Powals, P.E.

cc: J. Frost (RIES)

att.

**AVERAGE INJECTION RATE** 

# Calculation of Average Injection Rate

CURRENT REPORTING YEAR	2020	
CURRENT REPORTING MONTH	MARCY	
Date (month, year) of the first injection	on into either well at the Citrin Road Fa	cility
Na 2013		

# CURRENT MONTH (all volumes in gallons)

	Injected Waste	Injected Non-Waste	Total injected	
M	MI-163-1W-C010, Well #1-12			
Current Month	22,154	0	22,154	
Since facility first injected			14,590,119	
IMD	MI-163-1W-C011, Well #2-12			
Current Month	0	0	0	
Since facility first injected			4,648,763	
		Lifetime Combined	19,238,882	

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
lifetime number of months of injection $\times$ 43,830 minutes/month = $3,287,250$ minutes of injection
Lifetime combined injected volume 19, 238, 882 *3, 287, 250 minutes of injection
= 5.9 gpm average injection rate

**WELL 1 DATA** 

# DATA DESCRIPTION

In the month of March, no waste was received, and minimal injection was performed. 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 should be available by next week.

# 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

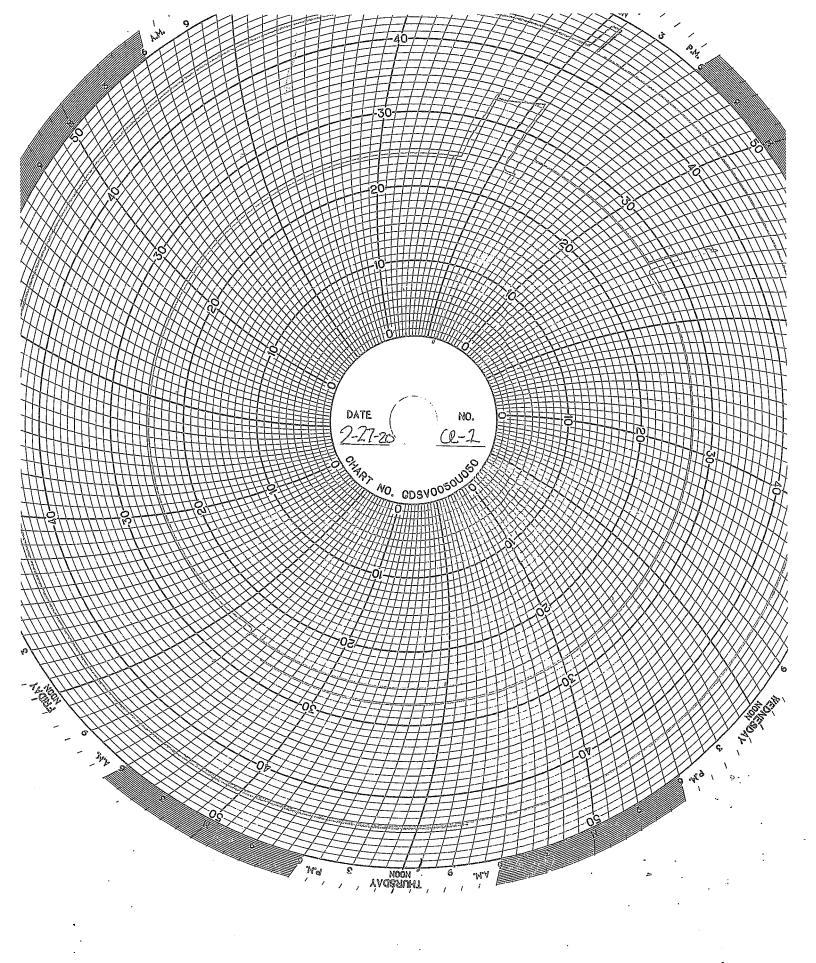
Red Pen - Well 1 Monthly Volume (chart value x 100,000)

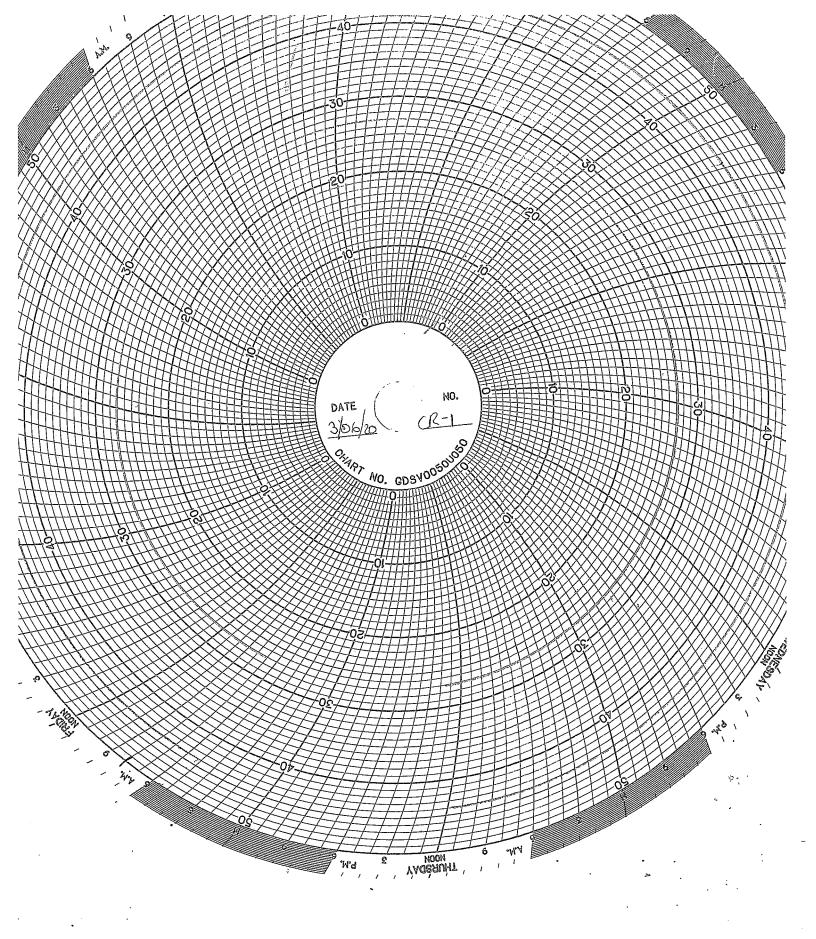
Channel #3

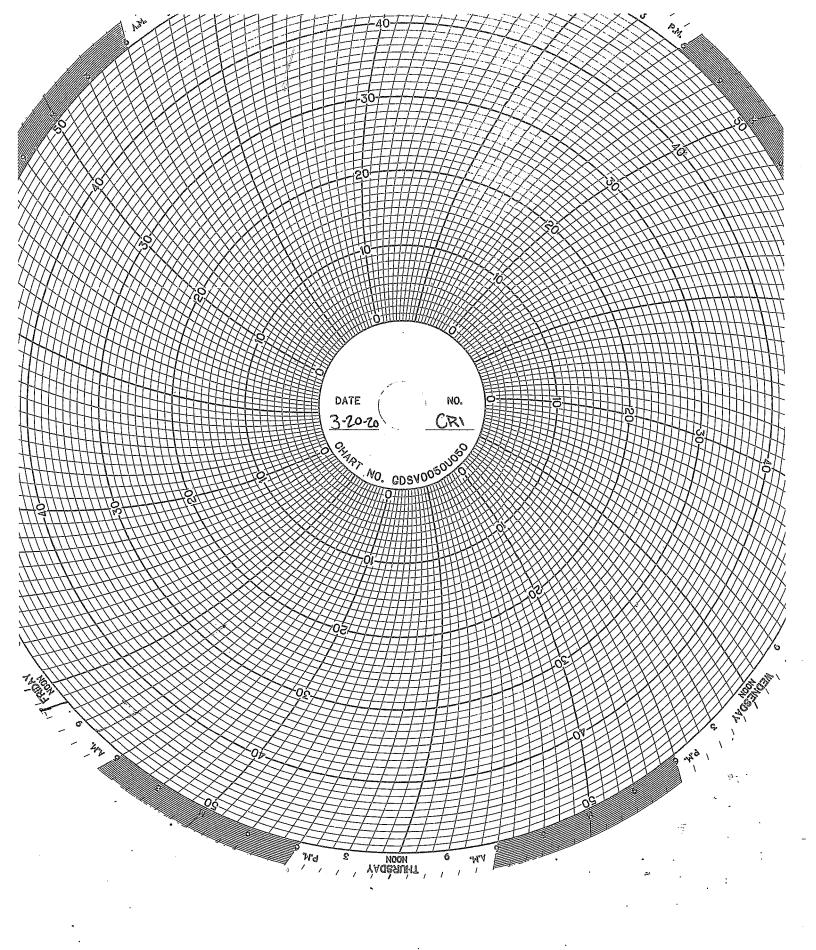
Green Pen - Well 2 Monthly Volume (chart value x 100,000)

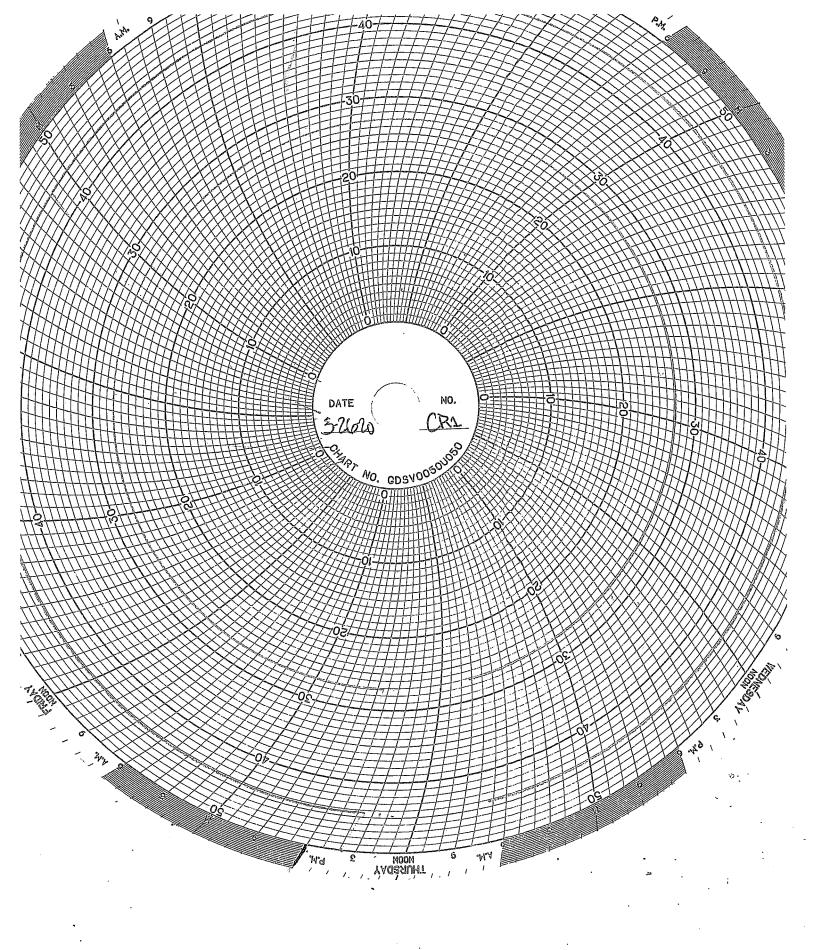
Channel #4

Black Pen – Temperature (chart value x 0)









**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

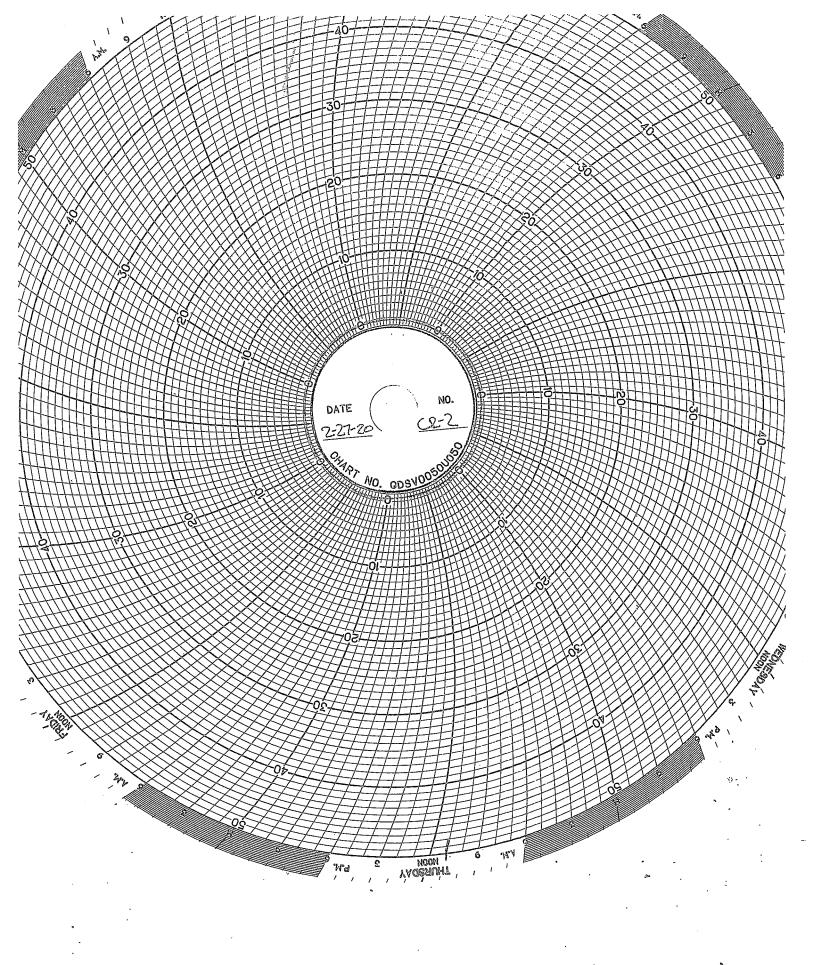
Red Pen - Well 1 Monthly Volume (chart value x 100,000)

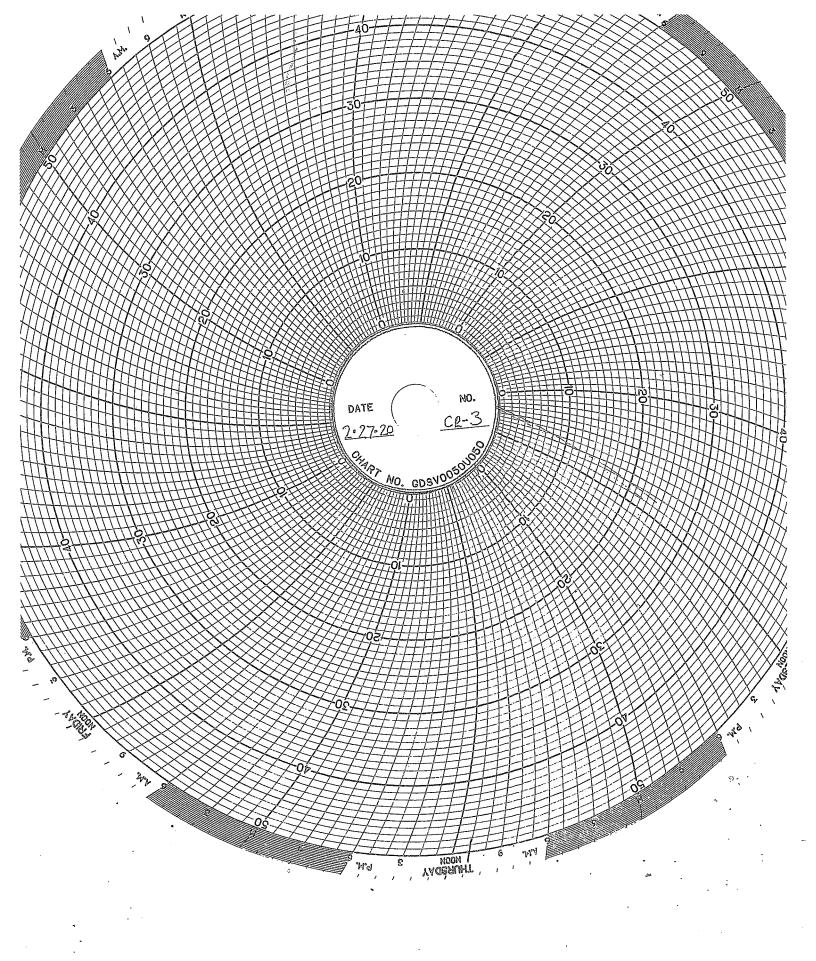
Channel #3

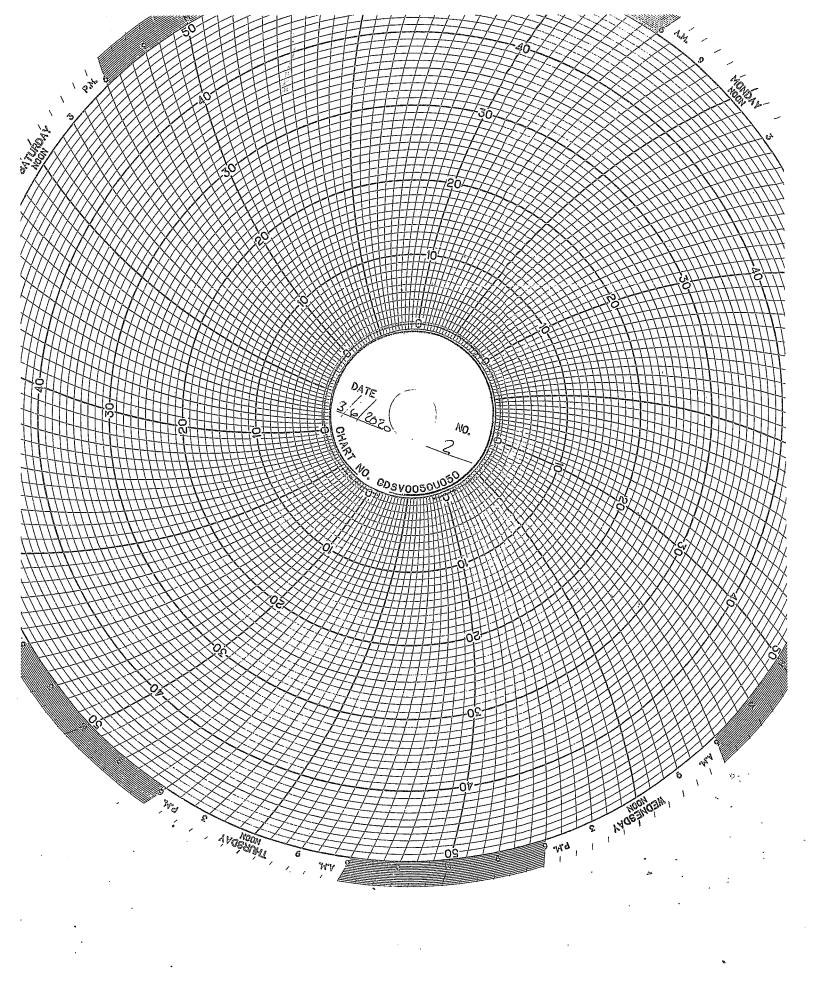
Green Pen - Well 2 Monthly Volume (chart value x 100,000)

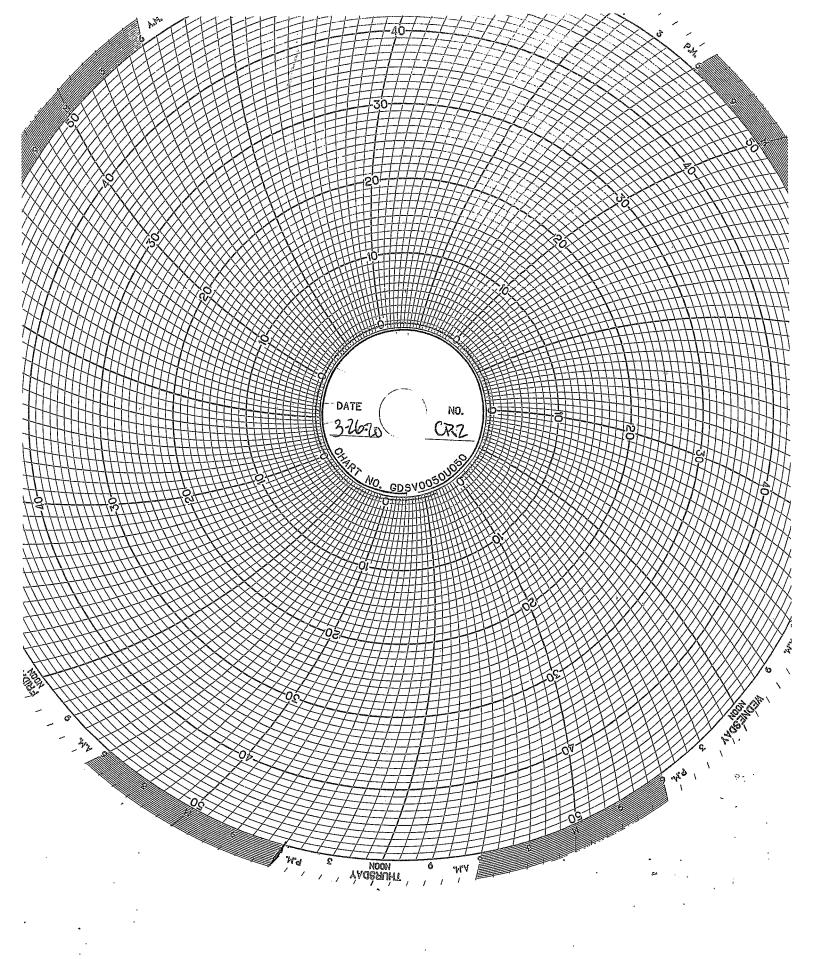
Channel #4

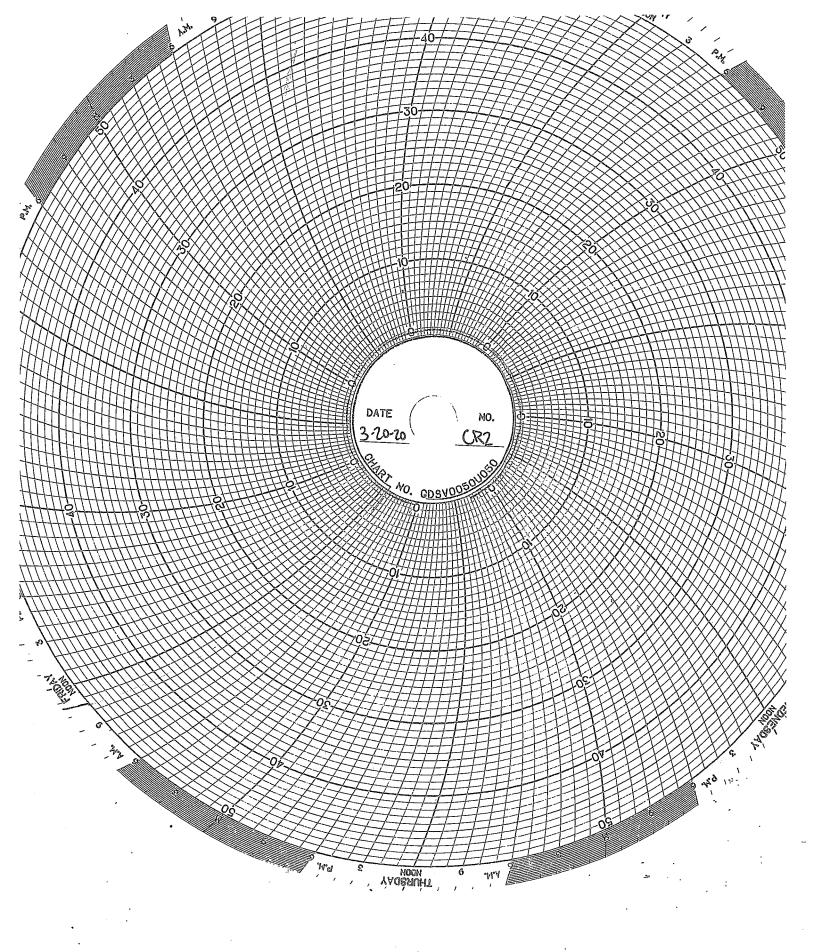
Black Pen - Temperature (chart value x 0)

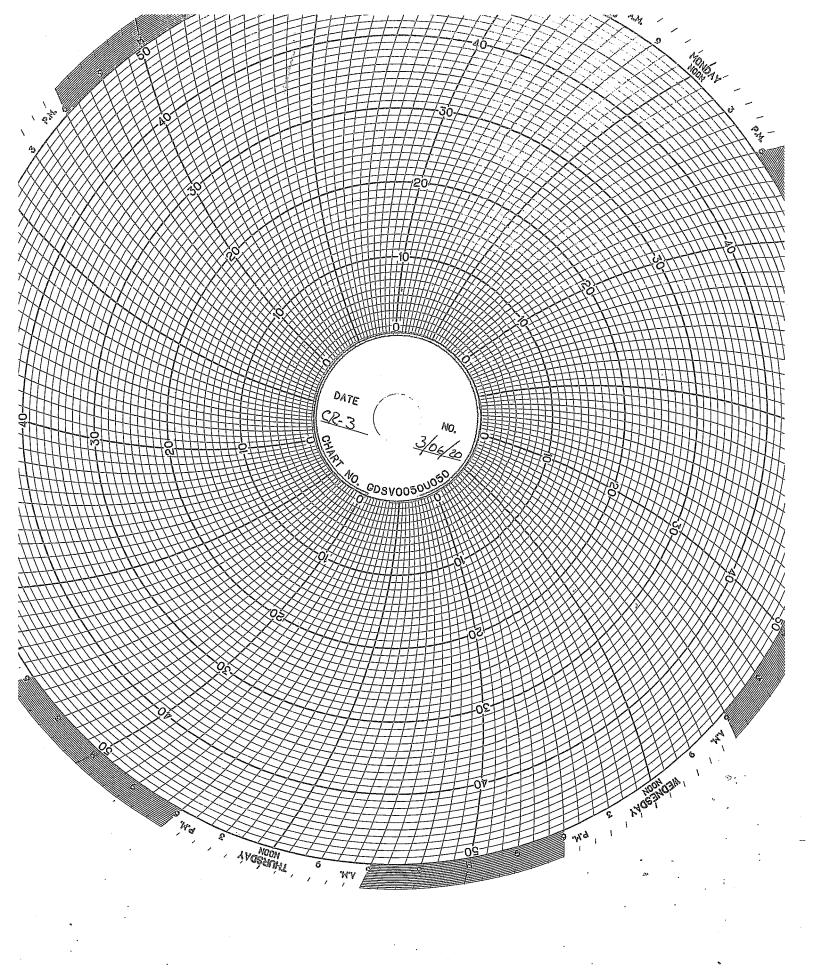


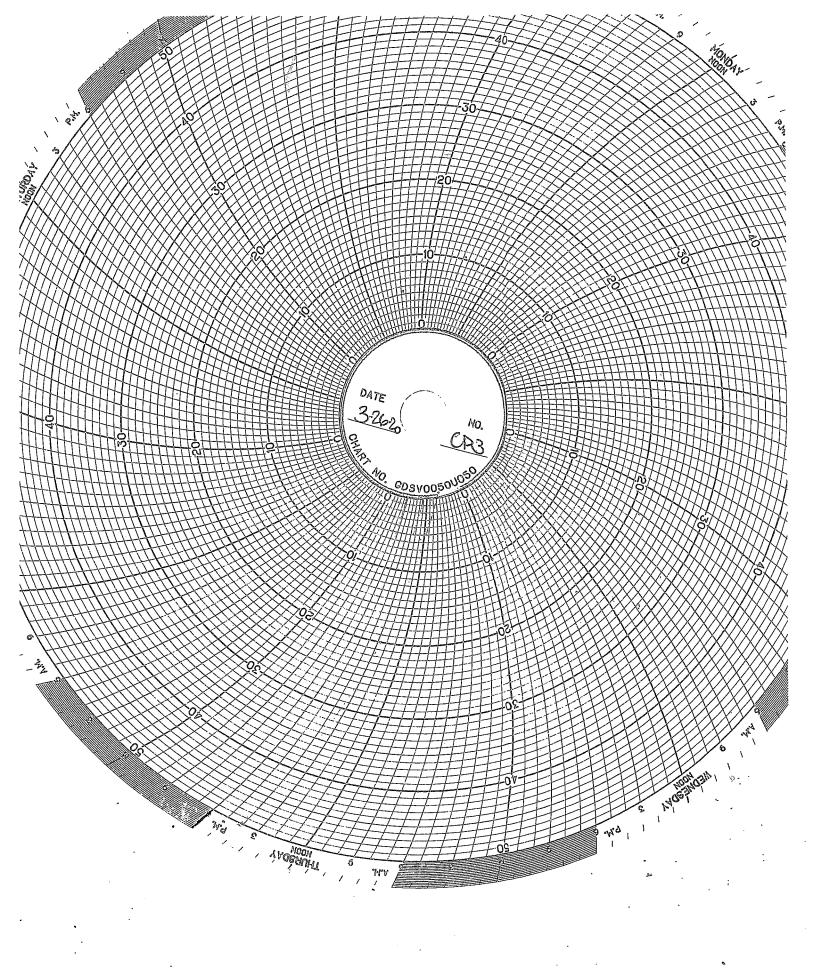


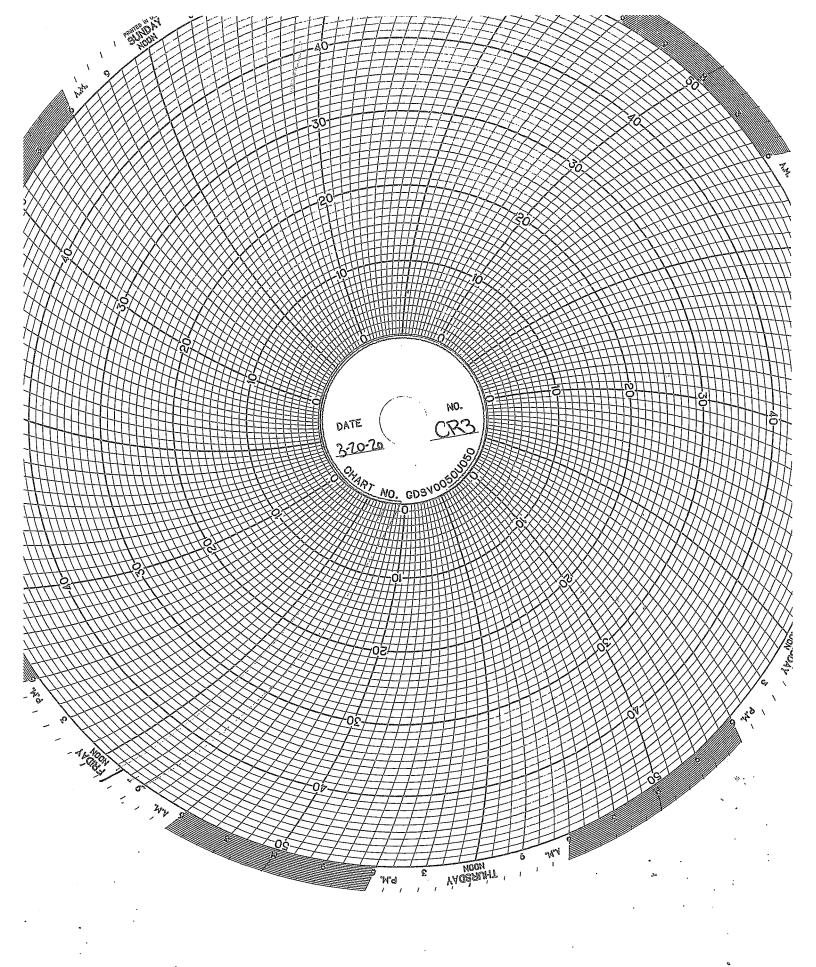












**MAINTENANCE** 

# **UIC Monthly Maintenance Log**

This month the Injection well 1 workover was started. The Pump house was finished being rebuilt. New controls were installed for the SCADA program to interface with the well insturmentation. Injection pump VFD's are still being wired and programmed.

CORROSION MONITORING

# 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
			•	
		,		



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



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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

Approved By:

Scott W. Yates

Plastics Testing Assistant Manager



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

Approved By:

Jim Diummond Physical 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 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.\*

# 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.

20450 HARPER AVENUE HARPER WOODS, MI 48225 PHONE (313) 885-9535 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, NI 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.

chesquiere phastic testing, in

M. W. Chesquiere

President

mwG/kni

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TOTAL 1 PAGES

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

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

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

Attention: Mr. Don Anderson

#### WORK REQUESTED:

Perform Barcol Hardness test on sample submitted.

#### DESCRIPTION OF SAMPLE:

Sample submitted was identified as a fiberglass test coupon.

(P. O. #Credit Card).

## WORK PERFORMED:

The state of the first of the state of the s 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.

#### <u>results</u>:

The following determination was made based upon the above test:

#### BARCOL HARDNESS

Specimen 1 90

Strongs on Creating Control and Activities

Committee mitte

William Commencer States and Decision of the season of Specimen was returned to the client on February 17, 2014

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PS 人物 : GCS等度企作的标识 \*\*

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Sire Land

President

mwg/am

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# 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

# 

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

— Meiissa Martin Sr. Project Technician Approved-By

Jim Drummond

Physical & Plastics Testing, Manager

ACCREDITED
A'Testiriy Lab

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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

Melissa Martin Sr. Project Technician

Approved By:

Scott W. Yates

Plastics Testing Assistant Manager

INJECTION FINGERPRINTS

RECEIVING & APPROVAL FORM

RECEIVING INFOR	MATION	
Date	3-2-20	<b>7</b>
Receiving ID#	T0302 20	9(
Manifest# Line		
Land Ban Cert included	Yes	No
EGT Approval #		
Generator	*	
Client		
Transporter		
Time in		
Time out		
Received by	JE	
Sampled by	I JF	

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LAB INEORMA	HON	
Compatible? (RT# )	7	
PCBs (ppm) (Oily Waste		
:Only)?		
TOC ppm (CC Waste Only)?		
Flash Point (F)	>140°F	
pH (S:Ū)	6.8	
Cyanides?:(mg/L)		پين د چين د
Sulfides? (ppm)?		
Specific Gravity	1.01	
Physical Description	The second se	
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	63°F	- 
:Conductivity	37.6	ZM
% Solids	0.5	,
Turbidity	Yes	No
Color		1 1
TSS (%)	20.1	
Radiation Screen (as needed)	1-	
Lab Signature/Initials *	John -	

Receiving & Departure Approval Form

REC04-01 - Page 1 1/20/20

RECEIVING & APPROVAL FORM

REGEMINGINFO	RMATION	
Date	3-2-3 I03022	20
Receiving ID#	IO3022	002
Manifest# Line		
Land Ban Cert included	Yes	No
EGT Approval #		
Generator		
Client:		
Transporter		<u></u>
Time in		
Time out		
Received by	JF	
Sampled by	I.JF	

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LAB INEORMA	TION	
Compatible? (RT# )	<u> </u>	and the state of the state of
PCBs (ppm) (Oily Waste	•	
Only)?		
TCC ppm (CC Waste Only)?		60°
Flash Point (F)	>140	F
рН (S:Ūл)	6.7	
Cyanides? (mg/L)	<u> </u>	
Sulfides? (ppm)?		
Specific Gravity	1.01	-
Physical Description		
Stream Consistency	Yes	No
Oil in Sample?	Yes	No
Temperature (F)	63	for .
Conductivity	44.	7 -5
% Solids	0.4	
Turbidity	Yes	No
Color	و در	ان المحمد الم المحمد المحمد المحم
TSS (%)	€0.1	
Radiation Screen (as needed)	7	2
Lab Signature/Initials	Justing Z	
	1.70	,

Receiving & Departure Approval Form-

Revision 6 1/20/20

# RECEIVING & APPROVAL FORM

RECEIVINGINFOR	MATION	
Date	3.3.	
Receiving ID#	I03032	2001
Manifest# Line		
Land Ban Cert Included	Yes	No
EGT Approval #		
Generator		
Client		
Transporter		
Time in		
Time out		
Received by	JF	
Sampled by	JF	

Business from the control of the first transfer of the second state of the second stat	ak menaming semengan sebagai s
LAB INFORMA	TION
Compatible? (RT# )	У
PCBs (ppm) (Øily Waste	
Only)?	
TOC.ppm (CC Waste Only)?	4.6
Flash Point (F)	>140°F
pH (S.U.)	
Cyanides? (mg/L)	6.8
Sulfides? (ppm)?	
Specific Gravity	1.01
Physical Description	
Stream Consistency	Yes No
Oil in Sample?	Yes No
Temperature (F)	(03F
Conductivity	41.5 mS
% Solids	0.5
Turbidity <sup>,</sup>	Yes No
Color	and the second s
T\$\$ (%)	50.1
Radiation Screen (as needed)	
Lab Signature/Initials	1 100 DOS

Receiving & Departure Approval Form

REC04-01 - Page 1

Revision 6 1/20/20 WASTE PROFILES