



28470 Citrin Drive Romulus, MI 48174  
o 734.946.1000 republicservices.com

December 31, 2019

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

Re: RIES (formerly EGT) Annual Report

Dear Mr. Batka:

Republic Industrial and Energy Solutions, LLC ("RIES") [formerly Environmental Geo-Technologies, LLC ("EGT")] hereby timely submits its 2019 Annual Report in conformance with the requirements of its two EPA UIC permits [#s MI-163-1W-C010 & MI-163-1W-C011), Section II.D.2].

RIES is providing all of the attached information in the same sequence as required by Section II.D.2 of the aforementioned permits.

- A. Results of the injection fluid analyses specified in Part III(A) and (E) of the permits, and the approved Waste Analysis Plan ("WAP") as recorded in the file for the permits have already been submitted to EPA as part of each RIES (formerly EGT) Monthly Report [monthly reports dated 12.20.13, 01.31.14, 02.24.14, 03.31.14, 04.30.14, 05.30.14, 06.30.14, 07.31.14, 08.29.14, 09.30.14, 10.31.14, 11.26.14, 12.26.14, 01.30.15, 02.27.15, 03.31.15, 04.30.15, 05.29.15, 06.30.16, 07.30.15, 08.31.15, 09.30.15, 10.30.15, 11.30.15 & 12.31.15, 01.29.16, 02.19.16, 03.31.16, 04.29.16, 05.31.16, 06.30.16, 07.29.16, 08.31.16, 09.30.16, 10.31.16, 11.30.16, 12.30.16, 01.31.17, 02.28.17, 03.31.17, 04.28.17, 05.31.17, 06.30.17, 07.31.17, 08.31.17, 09.28.17, 10.31.17, 11.30.17, 12.29.17, 01.31.18, 02.28.18, 03.23.18, 04.30.18, 05.31.18, 06.29.18, 07.31.18, 08.29.18, 09.30.18, 10.31.18, 11.30.18, 12.30.18, 01.31.19, 02.28.19, 03.29.19, 04.30.19, 05.31.19, 06.27.19, 07.31.19, 09.13.19, 09.30.19, 10.31.19, 11.27.19 and 12.27.19.]. In reporting fluid analyses, the permittee (i.e. RIES) shall identify the waste components of the waste stream by their common name, chemical name, structure and concentration, or as approved by the Director. RIES recognized the voluminous nature of this WAP documentation submission even prior to commencing injection and chose to provide such detail on an on-going monthly basis, in part, to be as currently transparent as possible. Rather than "killing trees" by providing redundant information, RIES has referenced this already publicly available information here. RIES hereby affirms that it has met the requirements of Part I(E)(10) ['samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity'], Part II(B)(2) ['no substances other than those identified in Part III(E) of this permit shall be injected'], and Part II(C)(3) ['the permittee (i.e. EGT) shall comply with the approved Waste Analysis Plan...'].

- B. The most recent Mechanical Integrity Testing & Reservoir Testing report dated August 16-19, 2019 was submitted to EPA on October 28, 2019.
- C. Results of the calibration of measuring equipment as required in Part II(C) (7) of the permits are provided in Attachment A.
- D. Records documenting the annual continuing operator training required in Part II (B) (5) of the permits for 2019 are provided in Attachment B.
- E. RIES has already complied with the Compliance audit report submission requirement in Part II (C) (8) of the permits by submitting the independent third-party (Nth Consultants, Ltd.) Compliance Audit (dated 12.20.19) on December 26, 2019.

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.  
Environmental Compliance Specialist

cc: J. Frost (EGT)

att.

**ATTACHMENT A**

## APPENDIX C

### GAUGE CALIBRATION CERTIFICATES

WSP





Calibration complies with ISO/IEC  
17025, ANSI/NCSL Z540-1, and 9001



Cert. No.: 4430-9910838

**Traceable® Certificate of Calibration for Kangaroo™ Thermometer**

Manufactured for and distributed by: Thomas Scientific Box 99,99 High Hill Road, Swedeboro, NJ, 08085-0099, U.S.A.

**Instrument Identification:**

Model: 1230N27,

S/N: 181697642

Manufacturer: Control Company

**Standards/Equipment:**

Description	Serial Number	Due Date	NIST Traceable Reference
Temperature Calibration Bath	93139		
Thermistor Module	A27129	05 Jan 2019	1000419631
Temperature Calibration Bath	A73332		
Temperature Probe	5202	26 Jan 2019	B8102060-1
Temperature Probe	5267	12 Jan 2019	B8102023

**Certificate Information:**

Technician: 104

Procedure: CAL-03

Cal Date: 29 Oct 2018

Cal Due Date: 29 Oct 2020

Test Conditions: 53.71%RH 23.78°C 1018mBar

**Calibration Data: (New Instrument)**

Unit(s)	Nominal	As Found	In Tol	Nominal	As Left	In Tol	Min	Max	±U	TUR
°C	N.A.	N.A.		0.00	-0.2	Y	-1	1	0.058	>4:1
°C	N.A.	N.A.		100.00	100.2	Y	99	101	0.058	>4:1

This certificate indicates Traceability to standards provided by (NIST) National Institute of Standards and Technology and/or a National Standards Laboratory.

A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty evaluation includes the instrument under test and is calculated in accordance with the ISO Guide to the Expression of Uncertainty in Measurement: (GUM). The uncertainty represents an expanded uncertainty using a coverage factor k=2 to approximate a 95% confidence level. In tolerance conditions are based on test results falling within specified limits with no reduction by the uncertainty of the measurement. The results contained herein relate only to the item calibrated. This certificate shall not be reproduced except in full, without written approval of Control Company.

Nominal=Standard's Reading; As Left=Instrument's Reading; In Tol=In Tolerance; Min/Max=Acceptance Range; ±U=Expanded Measurement Uncertainty; TUR=Test Uncertainty Ratio; Accuracy=±(Max-Min)/2; Min=As Left Nominal(Rounded) - Tolerance; Max= As Left Nominal(Rounded) + Tolerance;

*Nicol Rodriguez*

Nicol Rodriguez, Quality Manager

*Aaron Justice*

Aaron Justice, Technical Manager

Note:

**Maintaining Accuracy:**

In our opinion once calibrated your Kangaroo™ Thermometer should maintain its accuracy. There is no exact way to determine how long calibration will be maintained. Kangaroo™ Thermometer change little, if any at all, but can be affected by aging, temperature, shock, and contamination.

**Recalibration:**

For factory calibration and re-certification traceable to National Institute of Standards and Technology contact Control Company.

CONTROL COMPANY 12554 Galveston RD Suite B230 Webster TX USA 77598  
Phone 281 482-1714 Fax 281 482-9448 sales@control3.com www.control3.com

Control Company is an ISO/IEC 17025:2005 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01.  
Control Company is ISO 9001:2008 Quality Certified by DNV GL, Certificate No. CERT-01805-2006-AQ-HOU-RvA.  
International Laboratory Accreditation Cooperation (ILAC) - Multilateral Recognition Arrangement (MRA).



August 19, 2019

Mr. John Frost  
Environmental Geo-Technologies  
28470 Citrin Dr  
Romulus, MI 48174

Re: Testing Performed for Flowmeter Calibration  
Job No. ENGT008050-3

Dear Mr. Frost:

Please find enclosed (3) three calibration forms for the Environmental Geo-Technologies location dated August 13, 2019. If you have any questions, please feel free to call our office at 734-424-1200.

Sincerely,

Ken Wesley  
Chief Operating Officer

KW/jn

UIS Group of Companies

2290 Bishop Circle East  
Dexter, MI 48130  
Phone: (734) 424-1200 - Fax: (734) 424-0031  
uiscorp.com

UIS Group of Companies  
Utilities Instrumentation Service  
UIS SCADA  
UIS Renewable Power  
UIS - Ohio  
CTC Engineering



**Table of Contents**  
**Job #ENGT008050-3**



Customer Environmental Geo Technologies  
User Environmental Geo Technologies  
Plant 28470 Citrin Drive

<u>Substation</u>	<u>Position</u>	<u>Equipment</u>	<u>Page</u>
Well	Annulus 1 Pressure	ISO-81235D1-ISO CERT 2015 .....	1
Well	Injection 1 Well Pressure	ISO-81235D1-ISO CERT.2015 .....	2
Well	Well 1 Flow	ISO-81235D1-ISO CERT 2015 .....	3



# CALIBRATION CERTIFICATE

UIS SCADA  
 2290 Bishop Circle E.  
 Dexter, MI 48130  
 734-424-1200

CUSTOMER Environmental Geo Technologies CERTIFICATE # ENGT008050-3, 1 of 3  
 ADDRESS 28470 Citrin Drive; Romulus MI US 48174 JOB # ENGT008050-3  
 USER Environmental Geo Technologies; 28470 Citrin Drive; Romulus MI US 48174 PAGE 1 of 3  
 OWNER REPRESENTATIVE John Frost TELEPHONE 734-946-1000  
 Date: 8/13/2019 Temp: 76 °F Humidity: 55 %RH Equip Location: Plant  
 Sub/Parent: Well Position/Child: Annulus 1 Pressure

**NAMEPLATE**

Item Tested Pressure Transmitter  
 Manufacturer Rosemount Model Number 3051  
 Serial Number 0620406 Tag Number PIT3838  
 Operating Range 0-2000 psig (cal 0-1000 psig) Procedure/Method Fluke 754:75x\_umeng0000 rev Jul 2011

Line	INPUT psig		OUTPUT psig		Lo Spec	Hi Spec
	%	Applied	As Found	As Left		
1		0	1.0	0.0	-2	2
2		250	250.9	250.0	243	252
3		500	500.8	500.1	498	502
4		750	750.0	750.0	743	752
5		1000	1001.0	1000.1	998	1002
6						

Communicator: Fieldbus Totalizer As Found NA Totalizer As Left NA Gal

#	Manufacturer	Model	Serial/ID Number	Calibration Date	Calibration Due
1	Fluke	750PD5 (0-1000 psig)	SHOP-1054	5/8/2019	5/31/2020
2	Fluke	754	GCM-752	3/14/2019	3/31/2020
3	Extech	RH300(ambient)	GCM-637	3/20/2019	3/20/2021

**Comments:**

Fieldbus status check good, comms good, no block errors  
 use customer PC to access fieldbus parameters (no mA out, uses comms)  
 verified display on unit and in PLC/HMI

**Deficiencies:**

Traceability at UIS, Inc. is achieved through an unbroken chain of measurements with known uncertainties, to the International Systems of Units (SI) thru NIST or another Metrology Institute. The results contained within relate only to the item(s) calibrated. Pass/Fail or In/Out of tolerance statements are the property of UIS, Inc. and are based on data from measurements made, procedure utilized, professional experience. The uncertainty associated with this calibration has been included with any determination. It is the responsibility of the user of this equipment to determine if the results identified meet specific requirements for accuracy and its intended use. Due dates appearing on the certificate of calibration and label are determined by client for administrative purposes without the written approval of UIS, Inc., and do not imply continued conformance to specifications. The Confidence Factor is K=2 approx. 95% Confidence Level. All Certificates are page 1 of 1 unless otherwise specified. Page numbers at the top refer to the overall job. This certificate shall not be reproduced except in full, without the written approval of UIS, Inc.





# CALIBRATION CERTIFICATE

UIS SCADA  
2290 Bishop Circle E.  
Dexter, MI 48130  
734-424-1200

CUSTOMER Environmental Geo Technologies CERTIFICATE # ENGT008050-3, 2 of 3  
 ADDRESS 28470 Citrin Drive; Romulus MI US 48174 JOB # ENGT008050-3  
 USER Environmental Geo Technologies; 28470 Citrin Drive; Romulus MI US 48174 PAGE 2 of 3  
 OWNER REPRESENTATIVE John Frost TELEPHONE 734-946-1000  
 Date: 8/13/2019 Temp: 76 °F Humidity: 55 %RH Equip Location: Plant  
 Sub/Parent: Well Position/Child: Injection 1 Well Pressure

## NAMEPLATE

Item Tested Pressure Transmitter  
 Manufacturer Rosemount Model Number 3051  
 Serial Number 0058975 Tag Number PIT3939  
 Operating Range 0-2000 psig (cal 0-1000 psig) Procedure/Method File 754.75x\_umeng0000 rev Jul 2011

Line	%	INPUT psig		OUTPUT psig		Lo Spec	Hi Spec
		Applied	As Found	cor	As Left		
1		0	0.0	<input type="checkbox"/>	0.0	-2	2
2		250	249.9	<input checked="" type="checkbox"/>	249.9	248	252
3		500	500.1	<input type="checkbox"/>	500.1	498	502
4		750	750.1	<input checked="" type="checkbox"/>	750.1	748	752
5		1000	1000.1	<input type="checkbox"/>	1000.1	998	1002
6				<input checked="" type="checkbox"/>			

Communicator: Fieldbus Totalizer As Found NA Totalizer As Left: NA Gal

#	Manufacturer	Model	Serial / ID Number	Calibration Date	Calibration Due
1	Extech	RH300 (ambient)	GCM-687	3/20/2019	3/20/2021
2	Filuke	754	GCM-752	3/14/2019	3/31/2020
3	Filuke	750PDS (0-1000 psig)	SHOP-1054	5/8/2019	5/31/2020

Comments:  
Fieldbus status check good, comms good, no block errors  
use customer PC to access fieldbus parameters (no mA out, uses comms)  
verified display on unit and in PLC/HMI

Deficiencies:

Traceability at UIS, Inc. is achieved through an unbroken chain of measurements with known uncertainties, to the International Systems of Units (SI) thru NIST or another Metrology Institute. The results contained within relate only to the item(s) calibrated. Pass/Fail or In/Out of tolerance statements are the opinion of UIS, Inc., and are based on data from measurements made, procedure utilized, professional experience. The uncertainty associated with this calibration has been included with any identification. It is the responsibility of the user of this equipment to determine if the results identified meet specific requirements for accuracy and its intended use. Due dates appearing on the certificate of calibration and label are determined by client for administrative purposes without the written approval of UIS, Inc., and do not imply continued conformance to specifications. The Confidence Factor is K=2 approx. 95% Confidence Level. All Certificates are page 1 of 1 unless otherwise specified. Page numbers at the top refer to the overall job. This certificate shall not be reproduced except in full, without the written approval of UIS, Inc.



# CALIBRATION CERTIFICATE

UIS SCADA  
2290 Bishop Circle E.  
Dexter, MI 48130  
734-424-1200

CUSTOMER Environmental Geo Technologies CERTIFICATE # ENGT008050-3, 3 of 3  
 ADDRESS 28470 Citrin Drive; Romulus MI US 48174 JOB # ENGT008050-3  
 USER Environmental Geo Technologies; 28470 Citrin Drive; Romulus MI US 48174 PAGE 3 of 3  
 OWNER REPRESENTATIVE John Frost TELEPHONE 734-946-1000  
 Date: 8/13/2019 Temp: 76 °F Humidity: 55 %RH Equip Location: Plant  
 Sub/Parent: Well Position/Child: Well 1 Flow

## NAMEPLATE

Item Tested Magnetic Flow Transmitter  
 Manufacturer Rosemount Model Number 8732E  
 Serial Number 0860253579 Tag Number FIT3832  
 Operating Range -907 to 907 GPM Procedure/Method Ros 8700: 00821-0100-4764 Rev 1997

Line	INPUT ft/sec		OUTPUT ft/sec			
	%	Applied	As Found	oot	As Left	oot
1		0	0.0	<input type="checkbox"/>	0.0	<input type="checkbox"/>
2		3	3.0	<input type="checkbox"/>	3.0	<input type="checkbox"/>
3		10	10.0	<input type="checkbox"/>	10.0	<input type="checkbox"/>
4		30	30.0	<input type="checkbox"/>	30.0	<input type="checkbox"/>
5				<input type="checkbox"/>		<input type="checkbox"/>

Communicator: Fieldbus Totalizer As Found 10023920 Totalizer As Left 10023920 Gal

#	Manufacturer	Model	Serial / ID Number	Calibration Date	Calibration Due
1	Rosemount	8714	SHOP-644	5/21/2019	5/31/2021
2	Extech	RH300(ambient)	GOM-697	3/20/2019	3/20/2021

### Comments:

tube cat#1066705710642005, 3 in tube, density 62.4, 5 Hz; Fieldbus status check good, comms good, no block errors  
 use customer PC with Logix5000 to access fieldbus parameters (no mA out, uses comms); totalizer from device internal thru fieldbus in Integrator block  
 verified display on unit and in PLC/HMI  
 wiring connections have corrosion. recommend cleaning and putting cover back on wire wire grips to minimize future issues

### Deficiencies:

Traceability at UIS, Inc. is achieved through an unbroken chain of measurements with known uncertainties, to the International System of Units (SI) the NIST or another Metrology Institute. The results contained within refer only to the item(s) calibrated. Pass/Fail or In/Out of tolerance statements are the opinions of UIS, Inc. decisions are based on data from measurements made, procedure utilized, professional experience. The uncertainty associated with this calibration has been included with any determination. It is the responsibility of the user of this equipment to determine if the regular identified meet specific requirements for accuracy and its intended use. Due dates appearing on the certificate of calibration and label are determined by client for administrative purposes without the written approval of UIS, Inc., and do not imply continued conformance to specifications. The Confidence Factor is K=2 approx. 95% Confidence Level. All Certificates are page 1 of 1 unless otherwise specified. Page numbers at the top refer to the overall Job. This certificate shall not be reproduced except in full, without the written approval of UIS, Inc.



Comment Summary  
Job #ENGT008050-3



PAGE 1 of 1

Customer Environmental Geo Technologies

User Environmental Geo Technologies

Plant: 28470 Citrin Drive Page: 1  
Substation: Well Date: 8/13/2019  
Position: Annulus 1 Pressure  
Equipment: ISO-81235D1-ISO CERT 2015

Comments: Fieldbus status check good, comms good, no block errors  
use customer PC to access fieldbus parameters (no mA out, uses comms)  
verified display on unit and in PLC/HMI

Plant: 28470 Citrin Drive Page: 2  
Substation: Well Date: 8/13/2019  
Position: Injection 1 Well Pressure  
Equipment: ISO-81235D1-ISO CERT 2015

Comments: Fieldbus status check good, comms good, no block errors  
use customer PC to access fieldbus parameters (no mA out, uses comms)  
verified display on unit and in PLC/HMI

Plant: 28470 Citrin Drive Page: 3  
Substation: Well Date: 8/13/2019  
Position: Well 1 Flow  
Equipment: ISO-81235D1-ISO CERT 2015

Comments: tube ca#1066705710642005, 3 in tube, density 62.4, 5 Hz; Fieldbus status check good, comms good, no block errors  
use customer PC with Logix5000 to access fieldbus parameters (no mA out, uses comms); totalizer from device internal thru fieldbus in Integrator block  
verified display on unit and in PLC/HMI  
wiring connections have corrosion. recommend cleaning and putting cover back on wire wire grips to minimize future issues

**APPENDIX 5**

**SURFACE GAUGE (SN 62685) CALIBRATION CERTIFICATE**



**Cal-scan Services Ltd.**

4188-93 Street  
Edmonton, Alberta, Canada  
T6E 5P5  
Phone: (780) 944-1377 Fax: (780) 944 - 1406

**Calibration Certificate**

**Model :** Hawk 9000 **Range :** 1,500.00 psi  
**Serial Number :** 62683 **Last Cal. Date :** 01-August-2018

**Specifications**

Calibration Pressure Range: 0.00 1,500.00 psi  
Calibration Temperature Range: -20.00 80.00 °C

**Pressure:**  
Accuracy ± 0.3600 psi (0.024 %FS)  
Resolution ± 0.0045 psi (0.0003 %FS)

**Temperature:**  
Accuracy ± 0.40 °C  
Resolution ± 0.001 °C

**Calibration Summary**

Pressure: Accuracy (maximum error) 0.10 psi  
Temperature: Accuracy (maximum error) 0.12 °C

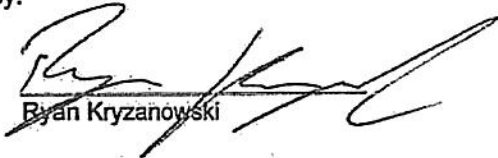
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**Traceability Statement**

All working standards are traceable to national or internationally recognized standards.

Calibrated with Cal-Scan DWG # 5

Calibrated by:

  
Ryan Kryzanowski



**A T T A C H M E N T B**

**INTEGRATED ENVIRONMENTAL, INC.**

*Certificate of Achievement*

This Is to Certify That:

**John Frost**

Has Completed the Following Training:

OSHA 29 CFR Part 1910.120

Hazardous Waste Operations and Emergency Response

8-Hour Refresher Training

Republic Industrial and Energy Solutions, LLC

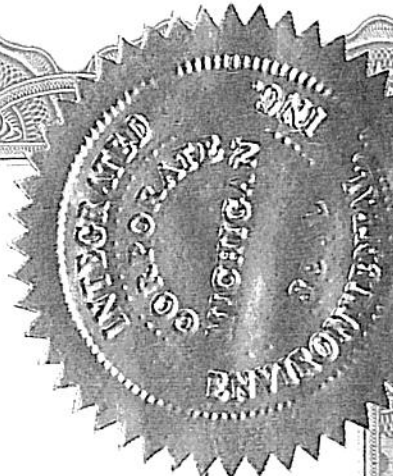
December 20, 2019

20 Dec. 2019

Date



Rick P. Harding, Ph.D.





# INTEGRATED ENVIRONMENTAL, INC.

## *Certificate of Achievement*

This Is to Certify That:

**John Frost**

Has Completed the Following Training:

Republic Industrial and Energy Solutions, LLC Training Modules  
as Presented in A10.B.2, Attachment 4 of the  
Operating License, Issued September 26, 2011: 1, 2, 3, 5 through 29 and 31 through  
51.

December 20, 2019

  
Rick P. Harding, Ph.D.

Date

20 Dec 2019





**INTEGRATED ENVIRONMENTAL, INC.**

*Certificate of Achievement*

This Is to Certify That:

**John Frost**

Has Completed the Following Training:

RCRA Compliance Annual Refresher Training for  
Republic Industrial and Energy Solutions, LLC

December 20, 2019

  
Rick P. Harding, Ph.D.

  
Date





**INTEGRATED ENVIRONMENTAL, INC.**

*Certificate of Achievement*

This Is to Certify That:

**Richard Fowals**

Has Completed the Following Training:

OSHA 29 CFR Part 1910.120

Hazardous Waste Operations and Emergency Response  
8-Hour Refresher Training

Republic Industrial and Energy Solutions, LLC  
December 20, 2019



Rick P. Harding, Ph.D.

20 Dec. 2019

Date





# INTEGRATED ENVIRONMENTAL, INC.

## *Certificate of Achievement*

This Is to Certify That:

**Richard Powals**

Has Completed the Following Training:

Republic Industrial and Energy Solutions, LLC Training Modules  
as Presented in A10.B.2, Attachment 4 of the  
Operating License, Issued September 26, 2011: 1, 2, 3, 5 through 29 and 31 through  
51.

December 20, 2019



Rick P. Harding, Ph.D.

20 Dec 2019

Date





**INTEGRATED ENVIRONMENTAL, INC.**

*Certificate of Achievement*

This Is to Certify That:

**Richard Powals**

Has Completed the Following Training:

RCRA Compliance Annual Refresher Training for  
Republic Industrial and Energy Solutions, LLC  
December 20, 2019

  
Rick P. Harding, Ph.D.

*20 Dec. 2019*

Date

