



# Department of Environmental Protection

2600 Blair Stone Road • Tallahassee, Florida 32399-2400

DEP Form: 62-761.500(1)  
Form Title: Storage Tank Equipment  
Registration Form  
Effective Date: July 2019  
Incorporated in Rule 62-761.500, F.A.C.

## Storage Tank System Equipment Registration Form

Fill out completely

### General Information

Company Name: Poly Lining Systems, Inc. Contact Name: Greg Eaton  
Company Address: 75-4 Main Street, Suite 300 City, State: Plymouth, NH Zip: 03264  
E-mail: GregE@polyliningsystems.com Contact Number: (508) 878-6041  
Product Name: Genesis Secondary Containment Tank System  
Model Number(s): Genesis Product Type: Tanks/UST w Secondary Containment Upgrade  
Rule(s) citation that registration is being requested within Chapter 62-761 (UST), and/or 62-762 (AST), 62-761.500(1)(d)

F.A.C.: Write a brief description of equipment registration request including product limitations:

Rigid wall retrofit containment system for USTs

### Information Checklist (Choose Yes, No, or N/A - Not Applicable):

|                                                                                                     | Yes                                 | No                                  | N/A                                 |
|-----------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Third-party Certification by a Nationally Recognized Testing Laboratory? (Required)              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 2. Documentation of third-party evaluation that the equipment meets DEP Rules?                      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 3. Documents included about the qualifications of the Nationally Recognized Testing Laboratory?     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 4. Technical information and drawings included?                                                     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 5. Installation Instructions included?                                                              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 6. Annual Operability Testing Requirements (Rules 62-761.500, 62-762.501, & 62-762.502 F.A.C.)?     | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 7. Integrity Testing Requirements (Rules 62-761.700, 62-762.701, & 62-762.702, F.A.C.)?             | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 8. Compatible with fuel blends containing >10% ethanol or >20% biodiesel?                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 9. Has the product been approved or registered in other countries or states? (If so provide list)   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 10. Any requirements for company-certified installers or trainers?                                  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 11. Was this product(s) previously approved or registered by the Department? If yes, EQ- <u>939</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 12. Any changes or modifications to the equipment since the last submittal to DEP?                  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

Document Information: Provide supporting documents indicated as "Yes" above including this form via email to [TankInfo@floridadep.gov](mailto:TankInfo@floridadep.gov), or documents can be sent to FDEP, Division of Waste Management, 2600 Blair Stone Road, MS 4560, Tallahassee, FL 32399.

### Write a brief description of equipment installation and performance in the U.S.:

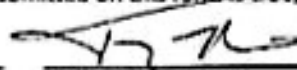
The Genesis Secondary Tank System was developed in the US by Delta Composite Systems and subsequently licensed for use by Poly Lining Systems both internationally and domestically. The Genesis System has been in use both internationally and domestically, including multiple installations in the State of Florida without a single known failure.

### Equipment Registration Certification:

To the best of my knowledge and belief, all information submitted on this form is true, accurate and complete.

Tony Rieck, Consultant

Printed Name and Title

  
Signature (must click to sign)

06/13/2025

Date

### For Department Use Only:

Date Application Received: 06/13/2025

Application complete: Yes: ☒ No: ☐

EQ- 939 Date of complete or incomplete letter sent: 06/13/2025 Date Equipment Requires Renewal: 06/13/2030

Storage tank system equipment requires renewal every 5 years in accordance with subsection 62-761.850(2), F.A.C.

June 13, 2025

Division of Waste Management  
Florida Department of Environmental Protection  
2600 Blair Stone Road, MS 4500  
Tallahassee, FL 32399-2400

via email to: [Tanknotify@floridadep.gov](mailto:Tanknotify@floridadep.gov)

**SUBJECT:** Storage Tank System Equipment Registration Form Supporting Documentation Cover Letter

**EQUIPMENT APPROVAL REQUESTED:** Tanks/UST with Internal Secondary Containment Upgrade EQ approval for Genesis Secondary Containment System for use by Poly Lining Systems and its trained applicators in compliance with FAC 62-761.500(1)(d).

**BACKGROUND:** I have been involved with the Genesis Secondary Containment System since its inception and development by Delta Composite Systems. The resin used for the Genesis Secondary Containment System was sourced from Poly Lining Systems and utilized PLS 360e base resin (marketed internationally as PLS 1776). In April 2012, Delta Composite Systems granted the right for Poly Lining Systems to market the Genesis Secondary Containment System to its international licensees. The system has been utilized by Poly Lining System applicators in South Africa, Taiwan, Saudi Arabia and Egypt with great success. In June of 2020, The State of Florida DEP approved the Genesis Secondary Containment Tank System providing the equipment registration number EQ-939. The Genesis Secondary Containment Tank System has been installed on multiple tanks in the State of Florida and there has never been a known failure of the Genesis Secondary containment Tank System.

**ATTACHED DOCUMENTS:**

1. Storage Tank System Equipment Registration Form
2. Agreement dated 10 February 2016 conferring international rights to Poly Lining Systems
3. Agreement dated 18 June 2020 conferring domestic rights to Poly Lining Systems
4. KEN WILCOX ASSOCIATES (KWA) Evaluation Report dated 04 August 2012
5. KEN WILCOX ASSOCIATES (KWA) Review of test data on resin compatibility dated 18 May 2018 and accompanying test data results as performed by UL.
6. Compatibility Statement from Poly Lining Systems regarding ethanol blends and biofuels.
7. KEN WILCOX ASSOCIATES (KWA) letter attesting to the Genesis Secondary Containment System compliance with FAC 62-761.500 requirements.

**ITEM CHECKLIST NOTES:**

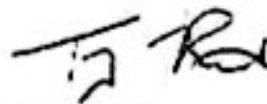
1. 3<sup>rd</sup> party certification by Ken Wilcox Associates (attached document #4)
2. See attached document #7 from Ken Wilcox Associates.
3. Ken Wilcox Associates is a well-recognized nationally recognized testing laboratory with numerous references within the FAC.

4. Technical information and drawings are contained in the Ken Wilcox Associates report (attached document #4).
5. Installation instructions are not included but are available upon request.
6. Annual operability testing requirements are not applicable
7. Other than initial testing prior to placing the tank in service, the requirements do not apply. The Genesis Secondary Containment System requires testing prior to being placed in service.
8. Test data for ethanol blends is provided in attached document #5 and the manufacturer statement of compatibility with ethanol blends and biofuels is provided in attached document #6.
9. The Genesis Secondary Containment System has been installed in South Africa, Taiwan, Saudi Arabia and Egypt. Also approved by CNPC (Chinese National Petroleum Company) but not installed in China. Multiple installations have been performed in Florida under the EQ-939 equipment approval issued in 2020.
10. Only Poly Lining Systems trained applicators are permitted to install the Genesis Secondary Containment System.
11. Previously approved in June of 2020 and provided equipment approval number EQ-939.
12. The Genesis Secondary Containment System has not been modified in any way since the original approval was granted by Florida DEP.

Please direct any questions regarding this application to me at the number provided below.  
Please note: office hours are Mountain Time Zone.

Sincerely,

T.R. Consulting, Inc.



Tony Rieck  
(719) 359-8467 – direct office telephone

## ACKNOWLEDGEMENT OF LICENSING AGREEMENT

Delta Composite Systems, LLC (hereinafter referred to as "DCS"), a duly organized Limited Liability Company formed under the laws of the State of New Hampshire, USA, hereby acknowledges a licensing agreement between itself and Poly Lining Systems, Inc. (herein referred to as "PLS"), a duly organized Incorporated company formed under the laws of the State of New Hampshire, USA, for international distribution and sub-licensing rights of the DCS proprietary technology, methodology, work craft, use of system names, proprietary materials and related products used to perform the field installation and commissioning of its Genesis Double Wall Tank Upgrade System. DCS further acknowledges the following:

A confidential agreement, in the form of a binding contract, exists between both parties (DCS and PLS), and;

Such agreement stipulates that PLS has the sole and exclusive rights to sub-license the Genesis System to all areas of the world outside of the United States and it's legal territories, and;

Such sub-licensing process shall be at the sole discretion of PLS, autonomous and separate from DCS.

Acknowledged by R.M. Pearlman, Managing Member, Delta Composite Systems, LLC, the 16<sup>th</sup> day of February, 2016.

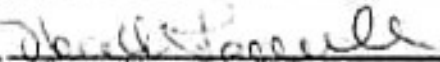
SIGNED: 

State of New Hampshire

County of Belknap

This instrument was acknowledged before me on the day of 2-10-16, by

R.M. Pearlman



(Signature of notarial officer)

(Seal)

Notary Public, State of New Hampshire **HEATHER JEWELL, Notary Public**  
My Commission Expires November 6, 2018

My commission expires: \_\_\_\_\_

## ACKNOWLEDGEMENT OF LICENSING AGREEMENT

Delta Composite Systems, LLC (hereinafter referred to as "DCS"), a duly organized Limited Liability Company formed under the laws of the State of New Hampshire, USA, hereby acknowledges a licensing agreement between itself and Poly Lining Systems, Inc. (herein referred to as "PLS"), a duly organized Incorporated company formed under the laws of the State of New Hampshire, USA, for International & Domestic distribution and sub-licensing rights of the DCS proprietary technology, methodology, work craft, use of system names, proprietary materials and related products used to perform the field installation and commissioning of its Genesis Double Wall Tank Upgrade Systems. DCS further acknowledges the following:

A confidential agreement, in the form of a binding contract, exists between both parties (DCS and PLS), and;

Such agreement stipulates that PLS has the sole and exclusive rights to sub-license the Genesis System to all areas of the world, including within the United States and it's legal territories, and;

Such sub-licensing process shall be at the sole discretion of PLS, autonomous and separate from DCS, and;

The term of the agreement between DCS and PLS is 50 years, commencing on June 6<sup>th</sup>, 2020, and terminating on June 6<sup>th</sup>, 2070, and;

The licensing agreement perpetually renews for additional periods of 20 years, automatically, unless either party to the agreement notifies the other party, in writing, at least 180 days prior to the expiration of the initial term or any subsequent current term of the agreement.

Acknowledged by Rob Pearlman, Managing Member, Delta Composite Systems, LLC, the 6th day of June, 2020.

SIGNED: \_\_\_\_\_

State of New Hampshire

County of BELKNAP

This instrument was acknowledged before me on the day of JUNE 18 2020, by

ROBERT PEARLMAN

(Signature of notarial officer)

(Seal)

Notary Public, State of New Hampshire

My commission expires: 12/5/2023





# **Evaluation of the Delta Composite Systems Genesis Monitoring System For Lined Tanks**

**Report**

**PREPARED FOR:**  
Delta Composite Systems

**April 4, 2012**



**Ken Wilcox Associates, Inc.**  
1125 Valley Ridge Drive, Grain Valley, MO 64029, USA  
Voice (816) 443-2494, Fax (816) 443-2495  
E-mail [kwilcox@kwaleak.com](mailto:kwilcox@kwaleak.com), Web <http://www.kwaleak.com>

# **Evaluation of the Delta Composite Systems Genesis Monitoring System For Lined Tanks**

**Report**

**PREPARED FOR:**  
Jeff Colner  
Delta Composite Systems  
75-4 Main Str., Ste 300  
Plymouth, NH 03264  
(877) 427-0090

**April 4, 2012**

## Preface

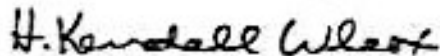
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This report presents the results of an independent third-party evaluation of Testing of the Delta Composite Systems (DCS) Genesis Leak Detection System. This is a double wall tank with an interstitial space which can be monitored utilizing vacuum sensors, liquid sensors, or as a liquid filled interstice through the installation of a reservoir containing approximately seven gallons.

The testing conducted by KWA was used to primarily verify that the interstice was open to all parts of the tank. The leak detection component consisted of a vacuum gauge that could be monitored manually to determine that the tank and liner were intact and that no leaks in either the inner or outer wall were present. The vacuum could also be monitored using any vacuum sensor on the NWGLDE list. This device could be continuously monitored by interfacing with a listed ATGS as long as the vacuum sensor provides the appropriate output. Some example liquid sensors that would be acceptable for use with the Genesis double-wall liner Leak Detection system have been provided in Appendix C of this report. The leak detection sensors for the interstice were evaluated using the "Alternative Test Procedures for Evaluating Leak Detection Methods: Evaluation of Liquid Sensors", September 1996.

Technical questions regarding this system should be directed to Mr. Jeff Colner at Delta Composite Systems.

Approved:



H. Kendall Wilcox, Ph.D., President  
September 20, 2011

### Contact regarding the Genesis System

Jeff Colner  
Delta Composite Systems  
75-4 Main Str., Ste 300  
Plymouth, NH 03264  
(877) 427-0090  
JeffC@amtechtanklining.com

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**Appendix A Photographs of Interstitial Communications Testing**

**Appendix B Photographs of Testing**

**Appendix C Selected Float Sensor Systems  
that have been listed by the NWGLDE**

**Appendix D Results forms for the NWGLDE**

## 1.0 Background

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The federal Environmental Protection Agency (EPA) has provided a series of documents<sup>1</sup>, which describe the procedures that are to be used to verify that leak detection equipment meets the performance requirements of the Federal Register. The requirements for evaluating systems that monitor the interstitial space of a double wall tank to determine the openness of an interstice were not included in those documents. It has therefore been necessary to develop independent methods for evaluating the performance of these systems. The objective was to provide evaluation procedures that would result in testing, which would be at least as rigorous as those described for other types of leak detectors. At a minimum the evaluation method determines the threshold for which a liquid level sensor will alarm.

There are two primary concerns with systems of this type: The complete communication throughout the interstitial space; and the selection of an appropriate sensor that has been approved by the NWGLDE. In addition, a list of appropriate sensors can be obtained from the NWGLDE website.

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<sup>1</sup> "Standard Test Procedures for Evaluating Leak Detection Methods," EPA/530 UST-90/001-7, March to October 1990. Seven different procedures were developed for different leak detection methods and released between March and October 1990.

## **2.0 Description of the Genesis Interstitial Monitoring System for Lined Tanks.**

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The tank used for the evaluation was constructed of one half of a 10,000 gallon tank. This configuration allowed for one end of the tank to be completely open for ease of access in testing. The tank was mounted on a trailer with an attached stair and cat walk providing easy access to the tank top. This design was also used as a demo tank for display purposes. The access manway in the tank top and the extension tube for the installation of the leak sensor were included in the demo tank. The system was designed to accommodate either sensors or vacuum sensors.

The laminate used is a double walled material with structural fiberglass reinforced resin material on either side of the formed interstice. The end cap (head) design is akin to inserting a FRP tank end cap into the steel tank. Thus, there is a space which is not a part of the primary or secondary containment that is created around the circumference of the tank at the end cap (see attached drawing).

The manufacturer descriptions for the Genesis System used in this evaluation have been provided in Appendix A.

The Genesis System is constructed by installing a fiberglass-reinforced inner liner with an interstitial space between the inner liner and a fiberglass-reinforced outer liner which is formed against the existing tank. The inner wall and the outer wall are constructed of a fiberglass-reinforced laminate. The interstitial space is formed using an very low solids (<5%) foam material that is 34 millimeters thick that, after heating, allows any liquid from a breach below the liquid level in either the inner or outer wall to enter the interstice. A liquid sensor is placed into a stationary tube until it is located at the bottom of the tank. A trough funnels liquid along the bottom of the tank to the monitoring point and, when the liquid level reaches 2 inches, the sensor sends a signal to a console notifying the owner/operator that a leak has occurred.

The interstice of the tank may be equipped with any switch system that will alarm when the fluid level in the interstice reaches approximately 2 inches in depth.

The switch used for monitoring can be obtained from various manufacturers who have completed an evaluation of the switch and are listed on the NWGLDE website (NWGLDE.org). A switch/monitor combination obtained from the same vendor of the monitoring system where the monitor and switch are both listed by the NWGLDE would be an acceptable approach. Sensors from several manufacturers are listed in this report. The sensor may also be connected to an ATGS or another approved monitor that will indicate when a leak is present.

Eventually, the plan is to have the system listed under UL 1316 as a field-installed fiberglass-reinforced plastic tank. Thus, the system is more structural than other available

systems on the market as the system will be expected to pass a burial test under vacuum without support from the steel tank shell once the 1316 testing is undertaken.

### 3.0 Evaluation Procedure

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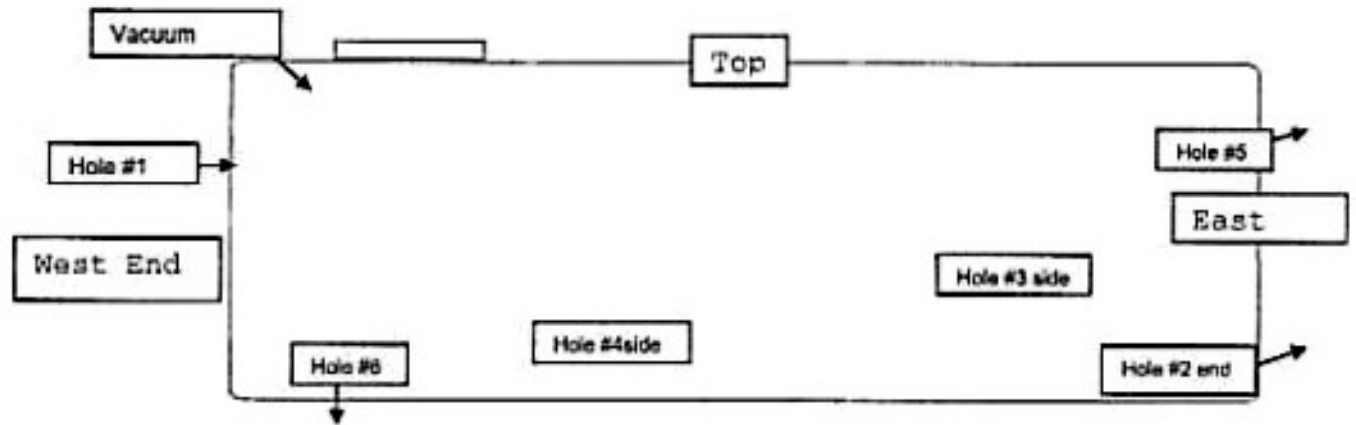
This section of the report provides a description of the procedures that were used during the evaluation of the openness of the interstice in the Genesis monitoring system.

The evaluation was conducted on a double wall tank consisting of an outer steel tank and an inner layer separated from the inner tank by a proprietary liner developed by Delta Composite Systems. Diagrams of the Delta Liner are in Appendix A.

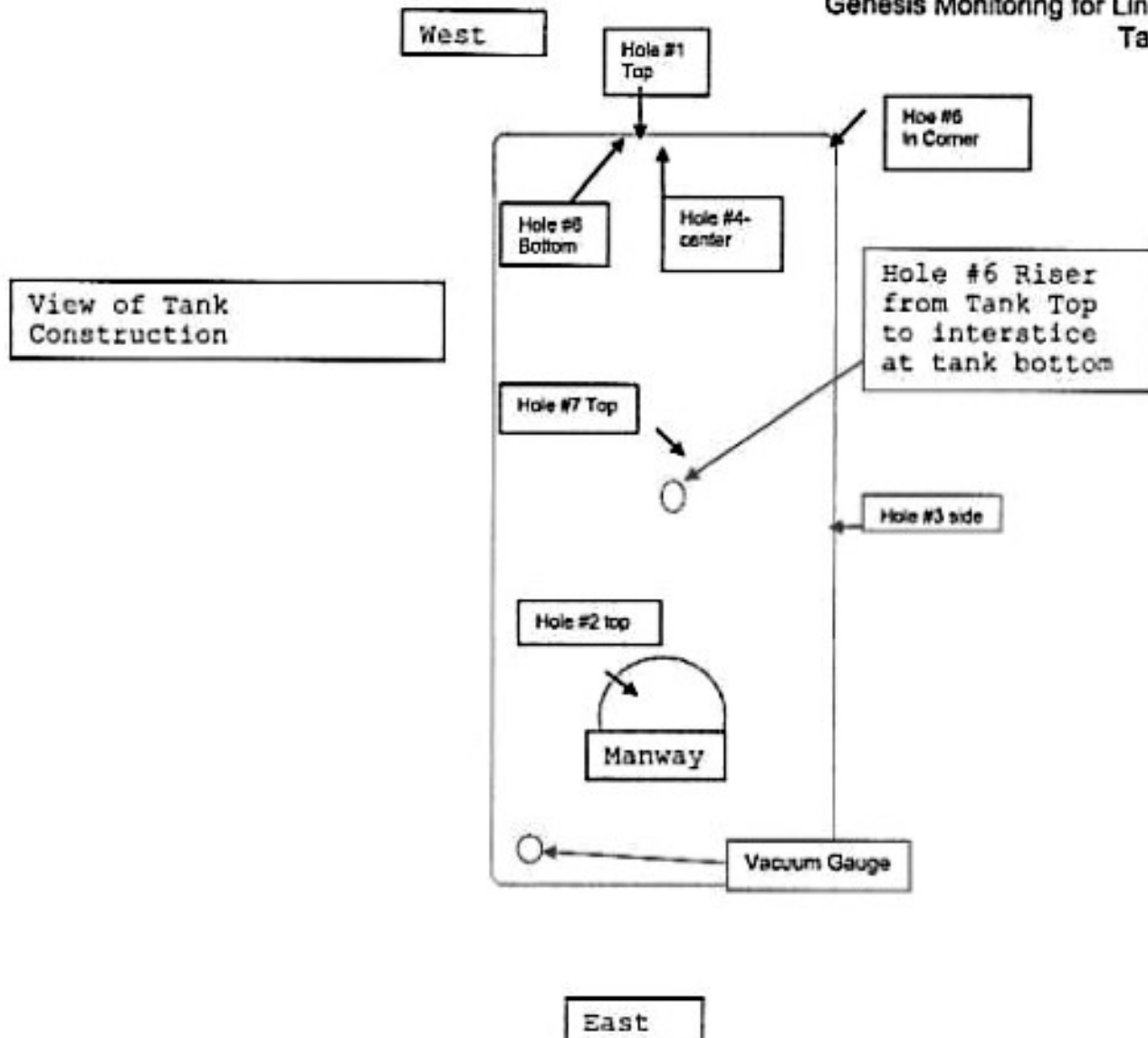
A key part of the evaluation includes determining that the interstice is open in all parts of the tank where liquid might be expected to be present. The liner must be designed to allow fluid entering the interstice due to a leak at any location in the inner or outer wall be channeled into the bottom of the tank where the sensor is located. A liquid sensor then determines the

The procedures used to determine the openness of the interstice are summarized below. The evaluation process involved drilling a series of holes in different locations on the inner wall. A total of 10 holes were drilled in approximately the positions indicated in Figure 1. This was tested by drilling a series of holes in the inner liner after a vacuum was placed on the interstice. A small smoke generator was used to verify that the interstice was open by noting that the smoke was readily sucked into the interstice. In all instances, the vacuum readily decreased to less than 1 mm of Hg within less than 11 minutes. This data has been provided in Table 1.

1. A vacuum was applied to prove interstice to verify that the tank was free of leaks. The vacuum was maintained for a few minutes to verify that the interstice was tight.
2. When the vacuum has been shown to be stable a series of small holes are drilled in the inner wall one at a time allowing air to leak into the interstice. If the interstice is open the vacuum will decay within a few minutes indicating that the interstice is open from that location to the reservoir.
3. The hole is then repaired and additional holes are drilled at various locations of the inner wall. A vacuum decay must be observed for each hole drilled in the inner wall.
4. The results are used to verify that there is communication throughout the interstice.
5. If a hole is drilled and no vacuum decay is observed, the test is terminated until repairs have been made to show the interstice is open at all points.



**Figure 1. Tank Diagram – Side View  
Showing Locations of Holes Produced for the  
Verification of an Open Interstice**



**Figure 2. Tank Diagram – Top View  
Showing Locations of Holes Produced for the  
Verification of an Open Interstice**

## 4.0 Test Results

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### 4.1. Open Interstice Tests

Several sets of test conditions were encountered during the open interstice testing. Although the initial testing indicated that the sides of the tank were open, the ends of the tank were not. To remedy this problem the heads were stripped and replaced with a spacer that had inadvertently been left off during construction. This fixed the communication problem.

A total of 10 holes were drilled at various locations around the tank, including both ends. Photographs of some of these locations have been provided in Appendix A. In all cases air flowed readily through all of the perforations in the inner or outer wall.

### 4.2. Leak Detection System

Rather than develop their own sensor/controller equipment, the vendor has opted to allow end users to select their own leak monitoring equipment. Although there are many liquid sensors that might be used, the vendor expects that the end user will select a sensor that will detect the presence of liquid in the interstice. The choice is not critical but the sensor must be able to fit into the space available and must be on the NWGLDE list of equipment that has been shown to operate as specified. This allows a choice of existing reservoir sensors that have already been evaluated and listed and are available from various manufacturers.

In some instances where the tank owner/operator already has a monitor such as an ATGS, it is a relatively simple matter to obtain the proper sensor from the monitor manufacturer, which can then be installed and hooked up.

No testing of sensors was conducted during this project. A list of appropriate sensors, taken from the NWGLDE website has been provided in Appendix C. All of the sensors listed have been listed by the NWGLDE. End users should verify that the monitoring sensors are compatible with their existing leak detection systems before purchase.

The response times for each sensor are also provided, but due to the design of most sensors the time to alarm is usually short, ranging from less than one second to 10-15 seconds or longer after liquid has reached the reservoir depending on the design of the monitor.

## 5.0 Conclusions

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The evaluation of the Delta Composite System Genesis leak detection system indicates that the interstice does preserve an open communication throughout the tank. This is an essential feature. When the interstice is equipped with the appropriate sensors leaks occurring below the fuel level or below the water table on the outside of the tank will be readily detected with a liquid float switch or similar sensor designed to detect liquids. A leak of 0.1gal/h would be sufficient to allow enough liquid in the interstice to produce an alarm within a few hours. According to the liner installer, a volume of around six gallons should be sufficient to produce an alarm. Thus, a leak of 0.1gal/h would trigger an alarm in around sixty hours or two to three days. This meets the leak detection criteria for annual tightness testing and monthly monitoring.

A key element of the installation is to select a sensor that is compatible with the monitoring unit and the product in the tank.. The best approach is to purchase the sensors and monitor from the same vendor, complete with the proper NWGLDE approvals.

A list of vendors taken from the NWGLDE listings for Liquid sensors has been included in Appendix C. More information can be obtained from specific vendors to assure that the proper equipment is installed.

## **Attachment A**

NWGLDE Results Forms

## Results of U.S. EPA Alternative Evaluation Liquid Level Sensors

This form documents the performance of the liquid level sensor described below. The evaluation was conducted by the equipment manufacturer or a consultant to the manufacturer according to the U.S. EPA's requirements for alternative protocols. The full evaluation report also includes a report describing the method, a description of the evaluation procedures, and a summary of the test data.

Tank owners using this system should keep this form on file to prove compliance with the federal regulations. Tank owners should check with state and local agencies to make sure this form satisfies their requirements.

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### Method Description

Name Delta Composite Systems and Genesis Monitoring System for Lined Tanks

Version number(s) Must have approved liquid level sensors and monitors (See  
NWGLDE list of sensors)

Vendor Delta Composite Systems  
(Name of Manufacturer)

75-4 Main Street, Ste 300  
(Address)

|                 |           |              |                       |
|-----------------|-----------|--------------|-----------------------|
| <u>Plymouth</u> | <u>NH</u> | <u>03264</u> | <u>(877) 427-0090</u> |
| (City)          | (State)   | (Zip Code)   | (Phone)               |

---

### Evaluation Parameters

The sensors listed above were tested for their abilities to respond to liquids when the sensors are installed in underground storage tank applications. The following parameters were determined from this evaluation.

Interstice - These parameters are met by the sensors listed on the NWGLDE listings. This evaluation considered only the openness of the

Threshold Levels - The liquid levels at which alarms are triggered.

Precision (standard deviation) - Agreement between multiple measurements of the same product level.

Detection Time - Amount of time the detector must be exposed to product before it responds.

Fall Time - Amount of time before the detector stops responding after being removed from the product.

Specificity - Types of products that the sensor will respond to.

## Evaluation Results

Note: If the test data can be presented in a more appropriate manner, the evaluator may select to present the information below in a data table, which can be attached to these forms.

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Specificity – Sensors listed by NWGLDE that respond to water and fuel are acceptable for use with the Genesis System.

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The interstice was verified to be open on the evaluation tank.

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Additional Limitations or Considerations – NWGLDE listed float sensors are required but must also be approved by Delta. A list of 3 sensors suggested by the vendor is shown below.

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PCE Approved sensors are listed below. Other sensors may also comply with NWGLDE requirements (see NWGLDE List for other suitable sensors)

1. Pneumercator ES825-100F/ ES-825-200F Interstitial Monitor
2. Pneumercator LC-2000 Series console Monitors, 4, 8, 12 or 16-Input Discriminating/Non-Discriminating Secondary Containment Leak/Point Level Alarm Console with Printer Option
3. Veeder Root TLS-300I 3-4 Tank Configurable Console  
Veeder Root Interstitial Sensor Mod. # 794390-40X

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**> Safety Disclaimer: This test procedure only addresses the issue of the methods ability to respond to liquids. It does not test the equipment for safety hazards.**

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## Certification of Results

I certify that the liquid level sensor was tested under conditions according to the vendor's operating instructions. I also certify that the evaluation was performed using methods described in the attached Alternative EPA Test Procedures for Liquid level sensors, and that the results presented above are those obtained during the evaluation.

H. Kendall Wilcox, Ph.D., President  
(printed name)

H. Kendall Wilcox

(signature)

April 4, 2012  
(date)

Ken Wilcox Associates, Inc.  
(organization performing evaluation)

Grain Valley, MO 64029  
(city, state, zip)

(816) 443-2494  
(phone number)

# Attachment B

## Test Data for Genesis Monitoring System

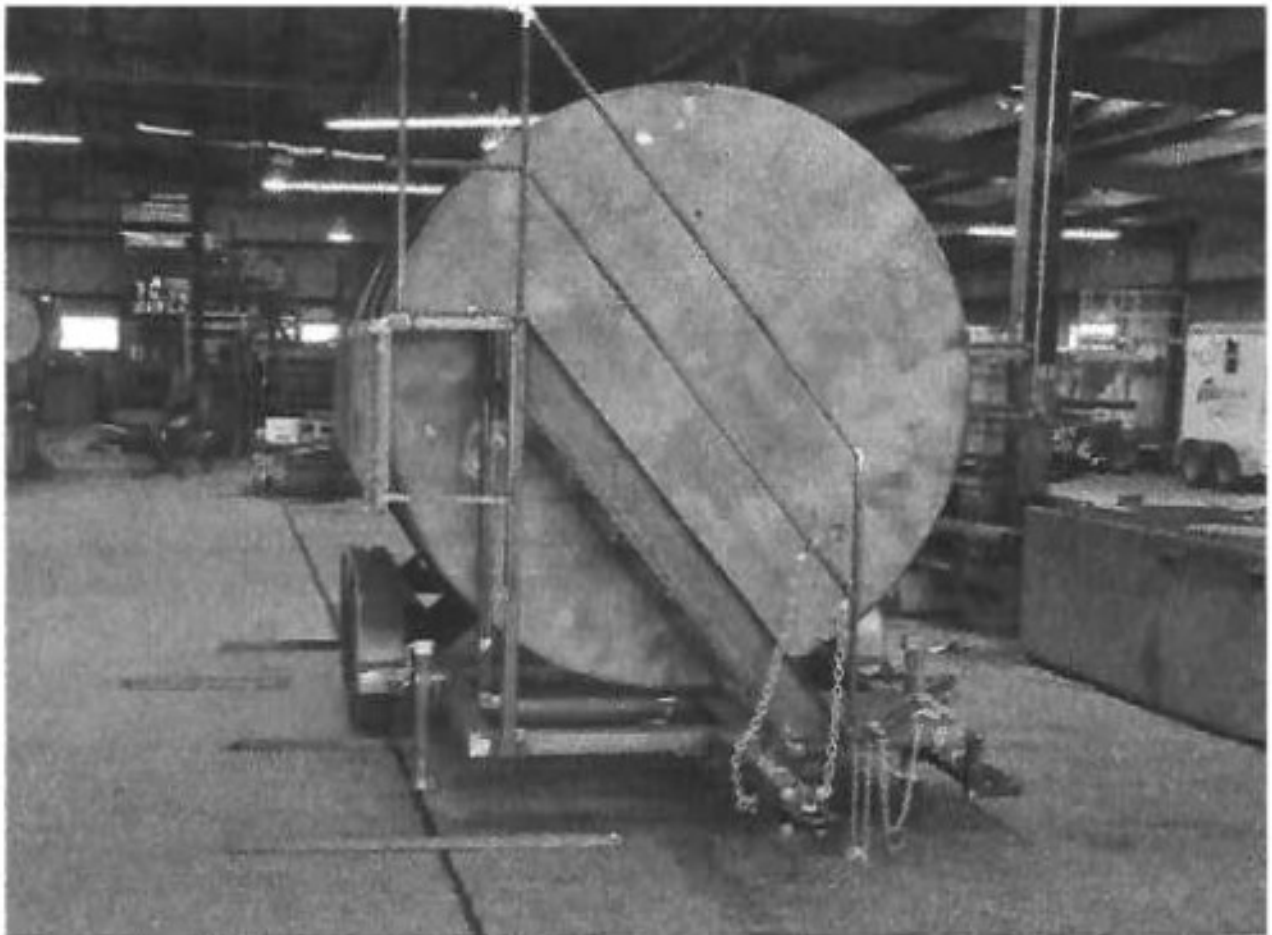
| Location No. | Description                       | Test Results           |
|--------------|-----------------------------------|------------------------|
| 1            | North end cap near center         | Pass – open interstice |
| 2            | Manway attachment                 | Pass – open interstice |
| 3            | North side weld joint             | Pass – open interstice |
| 4            | North side center mid level       | Pass – open interstice |
| 5            | Bottom east end near end of liner | Pass – open interstice |
| 6            | North west corner, med level      | Pass – open interstice |
| 7            | Top near monitoring pipe entry    | Pass – open interstice |
| 8            | West end bottom center            | Pass – open interstice |
| 9            | South wall mid level              | Pass – open interstice |
| 10           | Southeast wall mid level          | Pass – open interstice |

## **Attachment C**

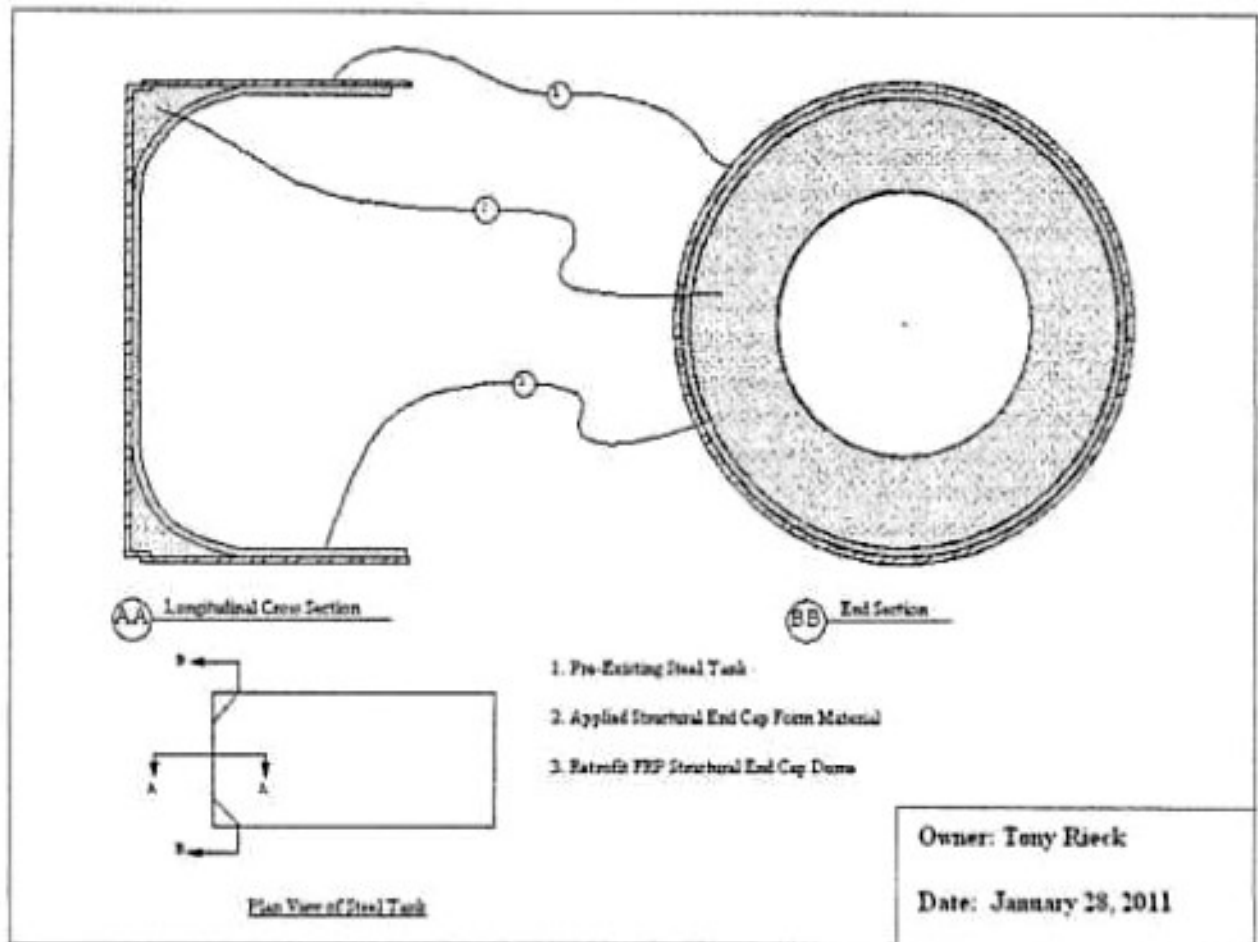
Tank Photographs

### **Figure 1. External View of Tank**

The laminate used is a double walled material with structural fiberglass reinforced resin material on either side of the formed interstice. The end cap (head) design is akin to inserting a FRP tank end cap into the steel tank. Thus, there is a space which is not a part of the primary or secondary containment that is created around the circumference of the tank at the end cap (see attached drawing).



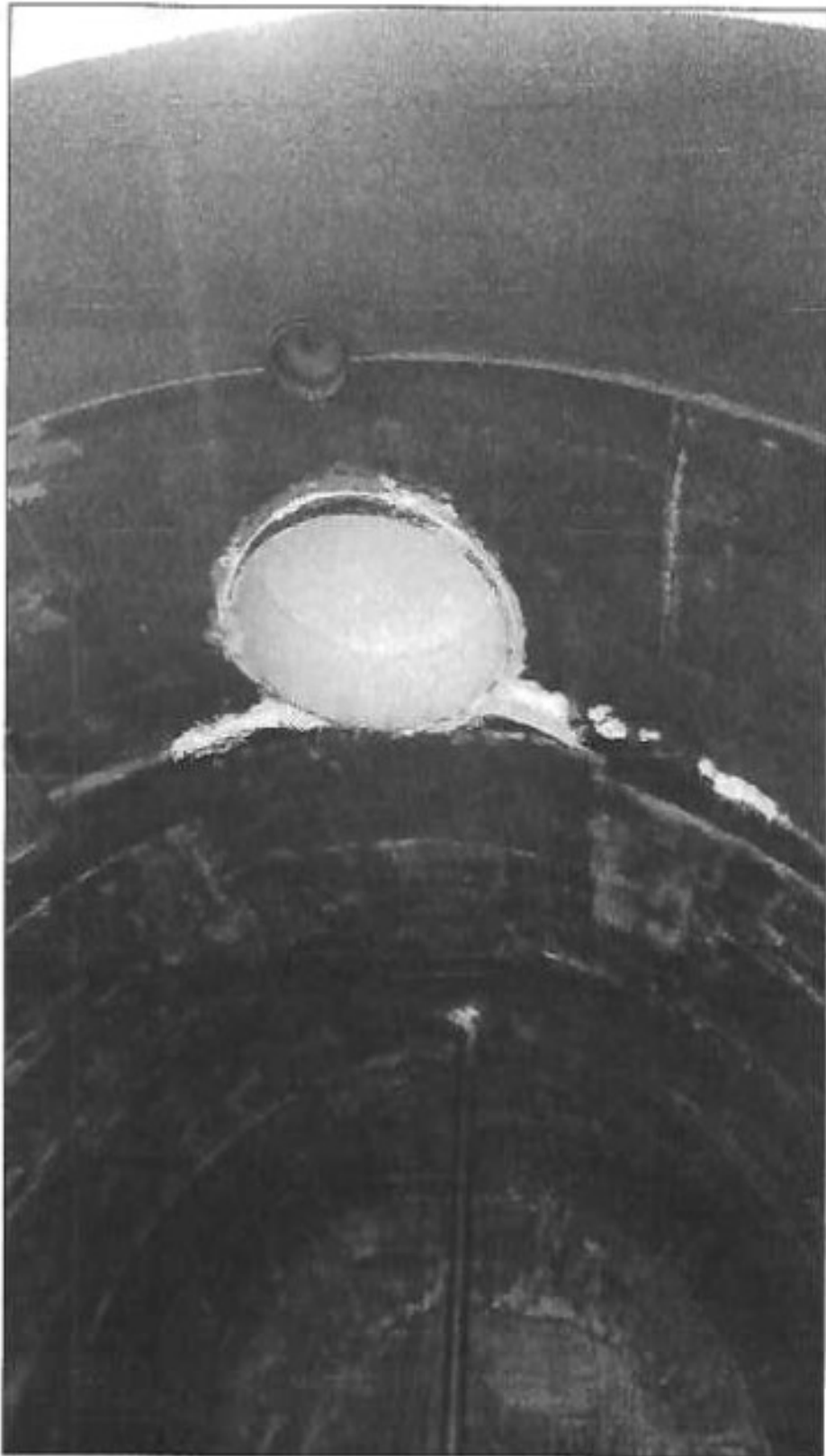
**Figure 2. Drawing of the end cap design**



**Figure 3. Interior of Tank Showing Monitoring Tube**



**Figure 4. Interior of Tank Showing Manway and monitoring tube.**



## **Ken Wilcox Associates, Inc.**

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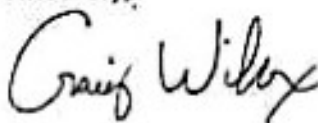
1125 Valley Ridge Drive  
Grain Valley, Missouri 64029  
Voice (816) 443-2494, Fax (816) 443-2495  
E-mail: [cwilcox@kwaleak.com](mailto:cwilcox@kwaleak.com)  
Web: <http://www.kwaleak.com>

May 18, 2018

To whom it may concern,

KWA has reviewed information provided by Poly Lining Systems, Inc. on the base resin used to formulate the PLS 360e tank lining material and the table included on the PLS "Material Compatibility with Motor Fuels" is the test data from immersion testing conducted by Underwriters Laboratories (UL) to determine compatibility with motor fuels.

Sincerely,

A handwritten signature in cursive script that reads "Craig Wilcox".

Craig Wilcox, President  
KWA, Inc.

[illegible]



75-4 Main Street, Suite 300  
Plymouth, NH 03264

### COMPATABILITY STATEMENT

In accordance with the compatibility affirmation requirements of 40 CFR Part 280.32, Poly Lining Systems, Inc. as the manufacturer of the Genesis Double Wall Tank Retrofit System approves the use of the Genesis Double Wall Tank Retrofit System for the storage of the following ranges of biofuels and alcohol blended fuels based upon a review of test performance data:

Biofuels - all biofuel blends from B5 to B100.

Alcohol blended gasoline fuels - 0% Ethanol to 30% Ethanol (inclusive) and Ethanol blends 80% or greater.

The above are in addition to demonstrated compatibility for use with all gasoline and fuel oil motor vehicle fuels and aviation fuels.

If you have any further questions regarding compatibility of the Genesis system, please contact our office.

Respectfully,

*Jeff Colner*

Jeff Colner  
VP - Operations

# **Ken Wilcox Associates, Inc.**

---

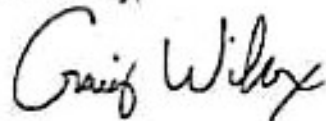
1125 Valley Ridge Drive  
Grain Valley, Missouri 64029  
Voice (816) 443-2494, Fax (816) 443-2495  
E-mail: [info@kwaleak.com](mailto:info@kwaleak.com)  
Web: <http://www.kwaleak.com>

June 12, 2020

To whom it may concern,

Ken Wilcox Associates performed an evaluation for Delta Composite Systems on their monitoring system for lined tanks with the results presented in the "Evaluation of the Delta Composite Systems Genesis Monitoring System for Lined Tanks", August 4, 2012. The testing of the Delta Composite System Genesis Retrofit Secondary Containment System (now owned and marketed by Poly Lining Systems) by KWA demonstrated that the Genesis Retrofit Secondary Containment System is compliant with FAC 62-761-500 requirements.

Sincerely,



Craig Wilcox, President  
KWA, Inc.



# Department of Environmental Protection

2600 Blair Stone Road ♦ Tallahassee, Florida 32399-2400

DEP Form: 62-761.900(9)

Form Title: Storage Tank Equipment

Registration Form

Effective Date: July 2019

Incorporated in Rule 62-761.850, F.A.C.

## Storage Tank System Equipment Registration Form

*Fill out completely*

### General Information

Company Name:

Contact Name:

Company Address:

City, State:

Zip:

E-mail:

Contact Number:

Product Name:

Model Number(s):

Product Type:

Rule(s) citation that registration is being requested within Chapter 62-761 (UST), and/or 62-762 (AST),

F.A.C.: Write a brief description of equipment registration request including product limitations:

### Information Checklist (Choose Yes, No, or N/A - Not Applicable):

**Yes      No      N/A**

1. Third-party Certification by a Nationally Recognized Testing Laboratory? (Required)
2. Documentation of third-party evaluation that the equipment meets DEP Rules?
3. Documents included about the qualifications of the Nationally Recognized Testing Laboratory?
4. Technical information and drawings included?
5. Installation instructions included?
6. Annual Operability Testing Requirements (Rules 62-761.500, 62-762.501, & 62-762.502 F.A.C.)?
7. Integrity Testing Requirements (Rules 62-761.700, 62-762.701, & 62-762.702, F.A.C.)?
8. Compatible with fuel blends containing >10% ethanol or >20% biodiesel?
9. Has the product been approved or registered in other countries or states? (If so provide list)
10. Any requirements for company-certified installers or trainers?
11. Was this product(s) previously approved or registered by the Department? If yes, EQ-
12. Any changes or modifications to the equipment since the last submittal to DEP?

Document Information: Provide supporting documents indicated as "Yes" above including this form via email to [Tanknotify@floridadep.gov](mailto:Tanknotify@floridadep.gov), or documents can be sent to FDEP, Division of Waste Management, 2600 Blair Stone Road, MS 4560, Tallahassee, FL 32399.

Write a brief description of equipment installation and performance in the U.S.:

### Equipment Registration Certification:

To the best of my knowledge and belief, all information submitted on this form is true, accurate and complete.

In File EQ-939

Printed Name and Title

Signature (right click to sign)

Date

### For Department Use Only:

Date Application Received:

Application complete:

Yes:

No:

**EQ-**

Date of complete or incomplete letter sent:

Date Equipment Requires Renewal:

*Storage tank system equipment requires renewal every 5 years in accordance with subsection 62-761.850(2), F.A.C.*

June 19, 2020

Division of Waste Management  
Florida Department of Environmental Protection  
2600 Blair Stone Road, MS 4500  
Tallahassee, FL 32399-2400

via email to: [Tanknotify@floridadep.gov](mailto:Tanknotify@floridadep.gov)

SUBJECT: Storage Tank System Equipment Registration Form Supporting Documentation  
Cover Letter

EQUIPMENT APPROVAL REQUESTED: Tanks/UST with Internal Secondary Containment  
Upgrade EQ approval for Genesis Secondary Containment System for use by Poly Lining  
Systems and its trained applicators in compliance with FAC 62-761.500(1)(d).

BACKGROUND: I have been involved with the Genesis Secondary Containment System since its inception and development by Delta Composite Systems. The resin used for the Genesis Secondary Containment System was sourced from Poly Lining Systems and utilized PLS 360e base resin (marketed internationally as PLS 1776). In April 2012, Delta Composite Systems granted the right for Poly Lining Systems to market the Genesis Secondary Containment System to its international licensees. The system has been utilized by Poly Lining System applicators in South Africa, Taiwan and Egypt with great success. Earlier this month, Delta Composite Systems transferred the domestic rights to the Genesis Secondary Containment System to Poly Lining Systems. Poly Lining Systems is now seeking approval to utilize the Genesis Secondary Containment System in various US states, including Florida.

ATTACHED DOCUMENTS:

1. Storage Tank System Equipment Registration Form
2. Agreement dated 10 February 2016 conferring international rights to Poly Lining Systems
3. Agreement dated 18 June 2020 conferring domestic rights to Poly Lining Systems
4. KEN WILCOX ASSOCIATES (KWA) Evaluation Report dated 04 August 2012
5. KEN WILCOX ASSOCIATES (KWA) Review of test data on resin compatibility dated 18 May 2018 and accompanying test data results as performed by UL.
6. Compatibility Statement from Poly Lining Systems regarding ethanol blends and biofuels.
7. KEN WILCOX ASSOCIATES (KWA) letter attesting to the Genesis Secondary Containment System compliance with FAC 62-761.500 requirements.

ITEM CHECKLIST NOTES:

1. 3<sup>rd</sup> party certification by Ken Wilcox Associates (attached document #4)
2. See attached document #7 from Ken Wilcox Associates.
3. Ken Wilcox Associates is a well-recognized nationally recognized testing laboratory with numerous references within the FAC.

4. Technical information and drawings are contained in the Ken Wilcox Associates report (attached document #4).
5. Installation instructions are not included, but are available upon request.
6. Annual operability testing requirements are not applicable
7. Other than initial testing prior to placing the tank in service, the requirements do not apply. The Genesis Secondary Containment System requires testing prior to being placed in service.
8. Test data for ethanol blends is provided in attached document #5 and the manufacturer statement of compatibility with ethanol blends and biofuels is provided in attached document #6.
9. The Genesis Secondary Containment System has been installed in South Africa, Taiwan and Egypt. Also approved by CNPC (Chinese National Petroleum Company), but not installed in China..
10. Only Poly Lining Systems trained applicators are permitted to install the Genesis Secondary Containment System.
11. No previous application for approval in the State of Florida has been made.
12. Item is not applicable as the Genesis Secondary Containment System has not been presented to the State of Florida for approval previously.

Please direct any questions regarding this application to me at the number provided below.  
Please note: office hours are Mountain Time Zone.

Sincerely,

T.R. Consulting, Inc.

A handwritten signature in black ink, appearing to read 'Tony Rieck', with a stylized flourish at the end.

Tony Rieck  
(719) 359-8467 – direct office telephone

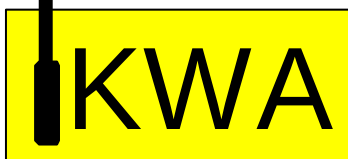


# **Evaluation of the Delta Composite Systems Genesis Monitoring System For Lined Tanks**

**Report**

**PREPARED FOR:**  
Delta Composite Systems

**April 4, 2012**



**Ken Wilcox Associates, Inc.**  
1125 Valley Ridge Drive, Grain Valley, MO 64029, USA  
Voice (816) 443-2494, Fax (816) 443-2495  
E-mail [kwilcox@kwaleak.com](mailto:kwilcox@kwaleak.com), Web <http://www.kwaleak.com>

# **Evaluation of the Delta Composite Systems Genesis Monitoring System For Lined Tanks**

**Report**

**PREPARED FOR:**

Jeff Colner  
Delta Composite Systems  
75-4 Main Str., Ste 300  
Plymouth, NH 03264  
(877) 427-0090

**April 4, 2012**

## Preface

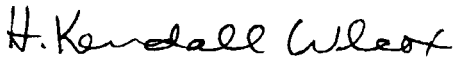
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This report presents the results of an independent third-party evaluation of Testing of the Delta Composite Systems (DCS) Genesis Leak Detection System. This is a double wall tank with an interstitial space which can be monitored utilizing vacuum sensors, liquid sensors, or as a liquid filled interstice through the installation of a reservoir containing approximately seven gallons.

The testing conducted by KWA was used to primarily verify that the interstice was open to all parts of the tank. The leak detection component consisted of a vacuum gauge that could be monitored manually to determine that the tank and liner were intact and that no leaks in either the inner or outer wall were present. The vacuum could also be monitored using any vacuum sensor on the NWGLDE list. This device could be continuously monitored by interfacing with a listed ATGS as long as the vacuum sensor provides the appropriate output. Some example liquid sensors that would be acceptable for use with the Genesis double-wall liner Leak Detection system have been provided in Appendix C of this report. The leak detection sensors for the interstice were evaluated using the "Alternative Test Procedures for Evaluating Leak Detection Methods: Evaluation of Liquid Sensors", September 1996.

Technical questions regarding this system should be directed to Mr. Jeff Colner at Delta Composite Systems.

Approved:



H. Kendall Wilcox, Ph.D., President  
September 20, 2011

### Contact regarding the Genesis System

Jeff Colner  
Delta Composite Systems  
75-4 Main Str., Ste 300  
Plymouth, NH 03264  
(877) 427-0090  
JeffC@amtechtanklining.com

## Table of Contents

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| Section | Title                        | Page No |
|---------|------------------------------|---------|
| 1.0     | Background -----             | 1       |
| 2.0     | Description of Sensors ----- | 2       |
| 3.0     | Evaluation Procedures -----  | 4       |
| 4.0     | Test Results -----           | 5       |
| 5.0     | Conclusions -----            | 6       |

**Appendix A Photographs of interstitial Communications Testing**

**Appendix B Photographs of Testing**

**Appendix C Selected Float Sensor Systems  
that have been listed by the NWGLDE**

**Appendix D Results forms for the NWGLDE**

## 1.0 Background

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The federal Environmental Protection Agency (EPA) has provided a series of documents<sup>1</sup>, which describe the procedures that are to be used to verify that leak detection equipment meets the performance requirements of the Federal Register. The requirements for evaluating systems that monitor the interstitial space of a double wall tank to determine the openness of an interstice were not included in those documents. It has therefore been necessary to develop independent methods for evaluating the performance of these systems. The objective was to provide evaluation procedures that would result in testing, which would be at least as rigorous as those described for other types of leak detectors. At a minimum the evaluation method determines the threshold for which a liquid level sensor will alarm.

There are two primary concerns with systems of this type: The complete communication throughout the interstitial space; and the selection of an appropriate sensor that has been approved by the NWGLDE. In addition, a list of appropriate sensors can be obtained from the NWGLDE website.

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<sup>1</sup> "Standard Test Procedures for Evaluating Leak Detection Methods," EPA/530 UST-90/001-7, March to October 1990. Seven different procedures were developed for different leak detection methods and released between March and October 1990.

## **2.0 Description of the Genesis Interstitial Monitoring System for Lined Tanks.**

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The tank used for the evaluation was constructed of one half of a 10,000 gallon tank. This configuration allowed for one end of the tank to be completely open for ease of access in testing. The tank was mounted on a trailer with an attached stair and cat walk providing easy access to the tank top. This design was also used as a demo tank for display purposes. The access manway in the tank top and the extension tube for the installation of the leak sensor were included in the demo tank. The system was designed to accommodate either sensors or vacuum sensors.

The laminate used is a double walled material with structural fiberglass reinforced resin material on either side of the formed interstice. The end cap (head) design is akin to inserting a FRP tank end cap into the steel tank. Thus, there is a space which is not a part of the primary or secondary containment that is created around the circumference of the tank at the end cap (see attached drawing).

The manufacturer descriptions for the Genesis System used in this evaluation have been provided in Appendix A.

The Genesis System is constructed by installing a fiberglass-reinforced inner liner with an interstitial space between the inner liner and a fiberglass-reinforced outer liner which is formed against the existing tank. The inner wall and the outer wall are constructed of a fiberglass-reinforced laminate. The interstitial space is formed using an very low solids (<5%) foam material that is 34 millimeters thick that, after heating, allows any liquid from a breach below the liquid level in either the inner or outer wall to enter the interstice. A liquid sensor is placed into a stationary tube until it is located at the bottom of the tank. A trough funnels liquid along the bottom of the tank to the monitoring point and, when the liquid level reaches 2 inches, the sensor sends a signal to a console notifying the owner/operator that a leak has occurred.

The interstice of the tank may be equipped with any switch system that will alarm when the fluid level in the interstice reaches approximately 2 inches in depth.

The switch used for monitoring can be obtained from various manufacturers who have completed an evaluation of the switch and are listed on the NWGLDE website (NWGLDE.org). A switch/monitor combination obtained from the same vendor of the monitoring system where the monitor and switch are both listed by the NWGLDE would be an acceptable approach. Sensors from several manufacturers are listed in this report. The sensor may also be connected to an ATGS or another approved monitor that will indicate when a leak is present.

Eventually, the plan is to have the system listed under UL 1316 as a field-installed fiberglass-reinforced plastic tank. Thus, the system is more structural than other available

systems on the market as the system will be expected to pass a burial test under vacuum without support from the steel tank shell once the 1316 testing is undertaken.

### **3.0 Evaluation Procedure**

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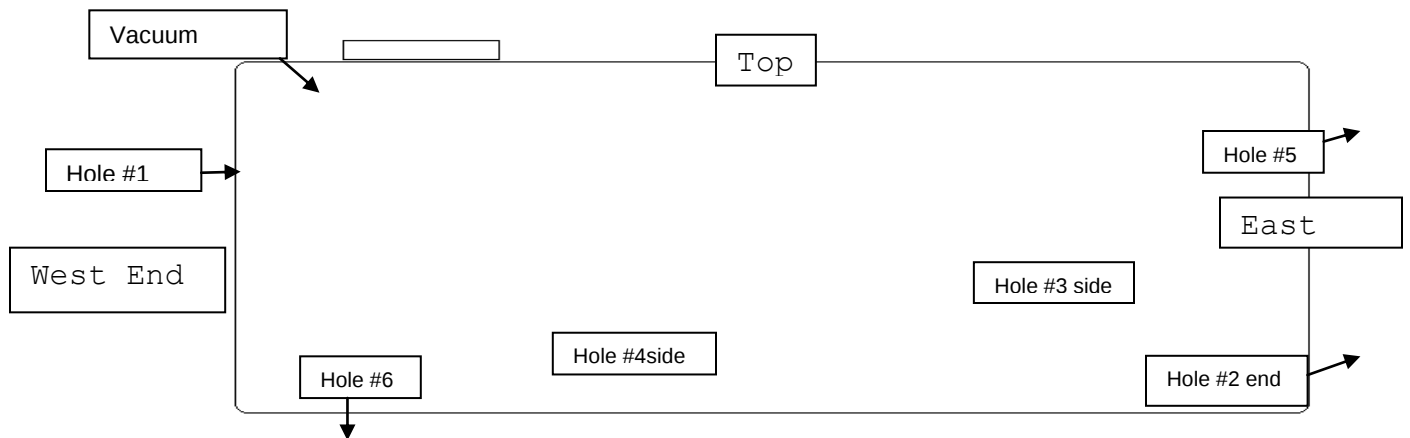
This section of the report provides a description of the procedures that were used during the evaluation of the openness of the interstice in the Genesis monitoring system.

The evaluation was conducted on a double wall tank consisting of an outer steel tank and an inner layer separated from the inner tank by a proprietary liner developed by Delta Composite Systems. Diagrams of the Delta Liner are in Appendix A.

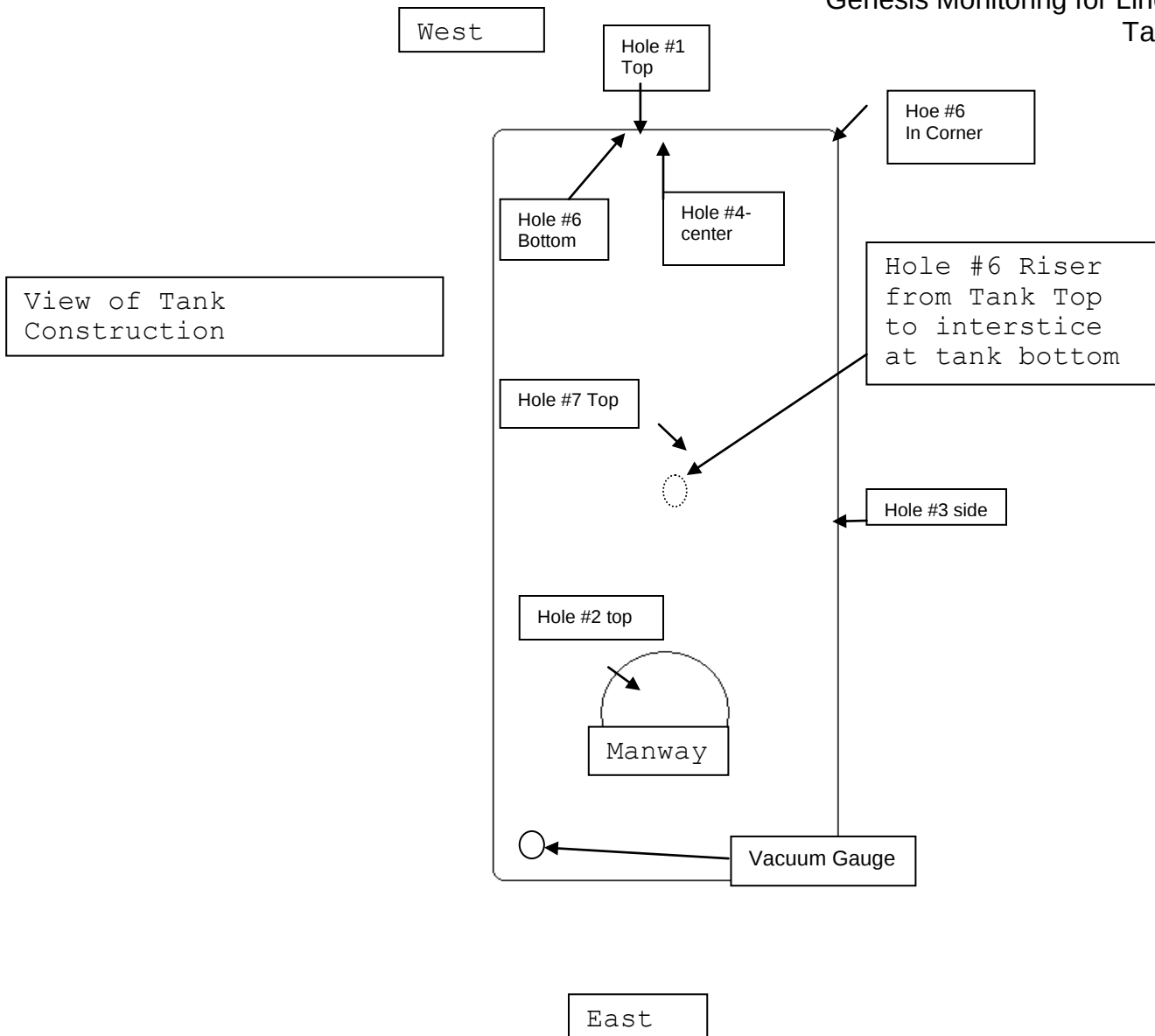
A key part of the evaluation includes determining that the interstice is open in all parts of the tank where liquid might be expected to be present. The liner must be designed to allow fluid entering the interstice due to a leak at any location in the inner or outer wall be channeled into the bottom of the tank where the sensor is located. A liquid sensor then determines the

The procedures used to determine the openness of the interstice are summarized below. The evaluation process involved drilling a series of holes in different locations on the inner wall. A total of 10 holes were drilled in approximately the positions indicated in Figure 1. This was tested by drilling a series of holes in the inner liner after a vacuum was placed on the interstice. A small smoke generator was used to verify that the interstice was open by noting that the smoke was readily sucked into the interstice. In all instances, the vacuum readily decreased to less than 1 mm of Hg within less than 11 minutes. This data has been provided in Table 1.

1. A vacuum was applied to prove interstice to verify that the tank was free of leaks. The vacuum was maintained for a few minutes to verify that the interstice was tight.
2. When the vacuum has been shown to be stable a series of small holes are drilled in the inner wall one at a time allowing air to leak into the interstice. If the interstice is open the vacuum will decay within a few minutes indicating that the interstice is open from that location to the reservoir.
3. The hole is then repaired and additional holes are drilled at various locations of the inner wall. A vacuum decay must be observed for each hole drilled in the inner wall.
4. The results are used to verify that there is communication throughout the interstice.
5. If a hole is drilled and no vacuum decay is observed, the test is terminated until repairs have been made to show the interstice is open at all points.



**Figure 1. Tank Diagram – Side View  
Showing Locations of Holes Produced for the  
Verification of an Open Interstice**



**Figure 2. Tank Diagram – Top View  
Showing Locations of Holes Produced for the  
Verification of an Open Interstice**

## 4.0 Test Results

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### 4.1. Open Interstice Tests

Several sets of test conditions were encountered during the open interstice testing. Although the initial testing indicated that the sides of the tank were open, the ends of the tank were not. To remedy this problem the heads were stripped and replaced with a spacer that had inadvertently been left off during construction. This fixed the communication problem.

A total of 10 holes were drilled at various locations around the tank, including both ends. Photographs of some of these locations have been provided in Appendix A. In all cases air flowed readily through all of the perforations in the inner or outer wall.

### 4.2. Leak Detection System

Rather than develop their own sensor/controller equipment, the vendor has opted to allow end users to select their own leak monitoring equipment. Although there are many liquid sensors that might be used, the vendor expects that the end user will select a sensor that will detect the presence of liquid in the interstice. The choice is not critical but the sensor must be able to fit into the space available and must be on the NWGLDE list of equipment that has been shown to operate as specified. This allows a choice of existing reservoir sensors that have already been evaluated and listed and are available from various manufacturers.

In some instances where the tank owner/operator already has a monitor such as an ATGS, it is a relatively simple matter to obtain the proper sensor from the monitor manufacturer, which can then be installed and hooked up.

No testing of sensors was conducted during this project. A list of appropriate sensors, taken from the NWGLDE website has been provided in Appendix C. All of the sensors listed have been listed by the NWGLDE. End users should verify that the monitoring sensors are compatible with their existing leak detection systems before purchase.

The response times for each sensor are also provided, but due to the design of most sensors the time to alarm is usually short, ranging from less than one second to 10-15 seconds or longer after liquid has reached the reservoir depending on the design of the monitor.

## 5.0 Conclusions

---

The evaluation of the Delta Composite System Genesis leak detection system indicates that the interstice does preserve an open communication throughout the tank. This is an essential feature. When the interstice is equipped with the appropriate sensors leaks occurring below the fuel level or below the water table on the outside of the tank will be readily detected with a liquid float switch or similar sensor designed to detect liquids. A leak of 0.1gal/h would be sufficient to allow enough liquid in the interstice to produce an alarm within a few hours. According to the liner installer, a volume of around six gallons should be sufficient to produce an alarm. Thus, a leak of 0.1gal/h would trigger an alarm in around sixty hours or two to three days. This meets the leak detection criteria for annual tightness testing and monthly monitoring.

A key element of the installation is to select a sensor that is compatible with the monitoring unit and the product in the tank.. The best approach is to purchase the sensors and monitor from the same vendor, complete with the proper NWGLDE approvals.

A list of vendors taken from the NWGLDE listings for Liquid sensors has been included in Appendix C. More information can be obtained from specific vendors to assure that the proper equipment is installed.

# **Attachment A**

NWGLDE Results Forms

# Results of U.S. EPA Alternative Evaluation

## Liquid Level Sensors

This form documents the performance of the liquid level sensor described below. The evaluation was conducted by the equipment manufacturer or a consultant to the manufacturer according to the U.S. EPA's requirements for alternative protocols. The full evaluation report also includes a report describing the method, a description of the evaluation procedures, and a summary of the test data.

Tank owners using this system should keep this form on file to prove compliance with the federal regulations. Tank owners should check with state and local agencies to make sure this form satisfies their requirements.

---

### Method Description

Name Delta Composite Systems and Genesis Monitoring System for Lined Tanks

Version number(s) Must have approved liquid level sensors and monitors (See  
NWGLDE list of sensors)

Vendor Delta Composite Systems  
(Name of Manufacturer)

75-4 Main Street, Ste 300  
(Address)

|                 |           |              |                       |
|-----------------|-----------|--------------|-----------------------|
| <u>Plymouth</u> | <u>NH</u> | <u>03264</u> | <u>(877) 427-0090</u> |
| (City)          | (State)   | (Zip Code)   | (Phone)               |

---

### Evaluation Parameters

The sensors listed above were tested for their abilities to respond to liquids when the sensors are installed in underground storage tank applications. The following parameters were determined from this evaluation.

Interstice - These parameters are met by the sensors listed on the NWGLDE listings. This evaluation considered only the openness of the

Threshold Levels – The liquid levels at which alarms are triggered.

Precision (standard deviation) - Agreement between multiple measurements of the same product level.

Detection Time - Amount of time the detector must be exposed to product before it responds.

Fall Time - Amount of time before the detector stops responding after being removed from the product.

Specificity - Types of products that the sensor will respond to.

## Evaluation Results

Note: If the test data can be presented in a more appropriate manner, the evaluator may select to present the information below in a data table, which can be attached to these forms.

---

Specificity – Sensors listed by NWGLDE that respond to water and fuel are acceptable for use with the Genesis System.

---

The interstice was verified to be open on the evaluation tank.

---

Additional Limitations or Considerations – NWGLDE listed float sensors are required but must also be approved by Delta. A list of 3 sensors suggested by the vendor is shown below.

---

PCE Approved sensors are listed below. Other sensors may also comply with NWGLDE requirements (**see NWGLDE List for other suitable sensors**)

1. Pneumercator ES825-100F/ ES-825-200F Interstitial Monitor EQ-269
2. Pneumercator LC-2000 Series console Monitors, 4, 8, 12 or 16-Input Discriminating/Non-Discriminating Secondary Containment Leak/Point Level Alarm Console with Printer Option EQ-917
3. Veeder Root TLS-300i 3-4 Tank Configurable Console Veeder Root Interstitial Sensor Mod. # 794390-40X EQ-614

---

**> Safety Disclaimer: This test procedure only addresses the issue of the methods ability to respond to liquids. It does not test the equipment for safety hazards.**

---

## Certification of Results

I certify that the liquid level sensor was tested under conditions according to the vendor's operating instructions. I also certify that the evaluation was performed using methods described in the attached Alternative EPA Test Procedures for Liquid level sensors, and that the results presented above are those obtained during the evaluation.

H. Kendall Wilcox, Ph.D., President  
(printed name)



(signature)

April 4, 2012  
(date)

Ken Wilcox Associates, Inc.  
(organization performing evaluation)

Grain Valley, MO 64029  
(city, state, zip)

(816) 443-2494  
(phone number)

# Attachment B

## Test Data for Genesis Monitoring System

| Location No. | Description                       | Test Results           |
|--------------|-----------------------------------|------------------------|
| 1            | North end cap near center         | Pass – open interstice |
| 2            | Manway attachment                 | Pass – open interstice |
| 3            | North side weld joint             | Pass – open interstice |
| 4            | North side center mid level       | Pass – open interstice |
| 5            | Bottom east end near end of liner | Pass – open interstice |
| 6            | North west corner, med level      | Pass – open interstice |
| 7            | Top near monitoring pipe entry    | Pass – open interstice |
| 8            | West end bottom center            | Pass – open interstice |
| 9            | South wall mid level              | Pass – open interstice |
| 10           | Southeast wall mid level          | Pass – open interstice |

# **Attachment C**

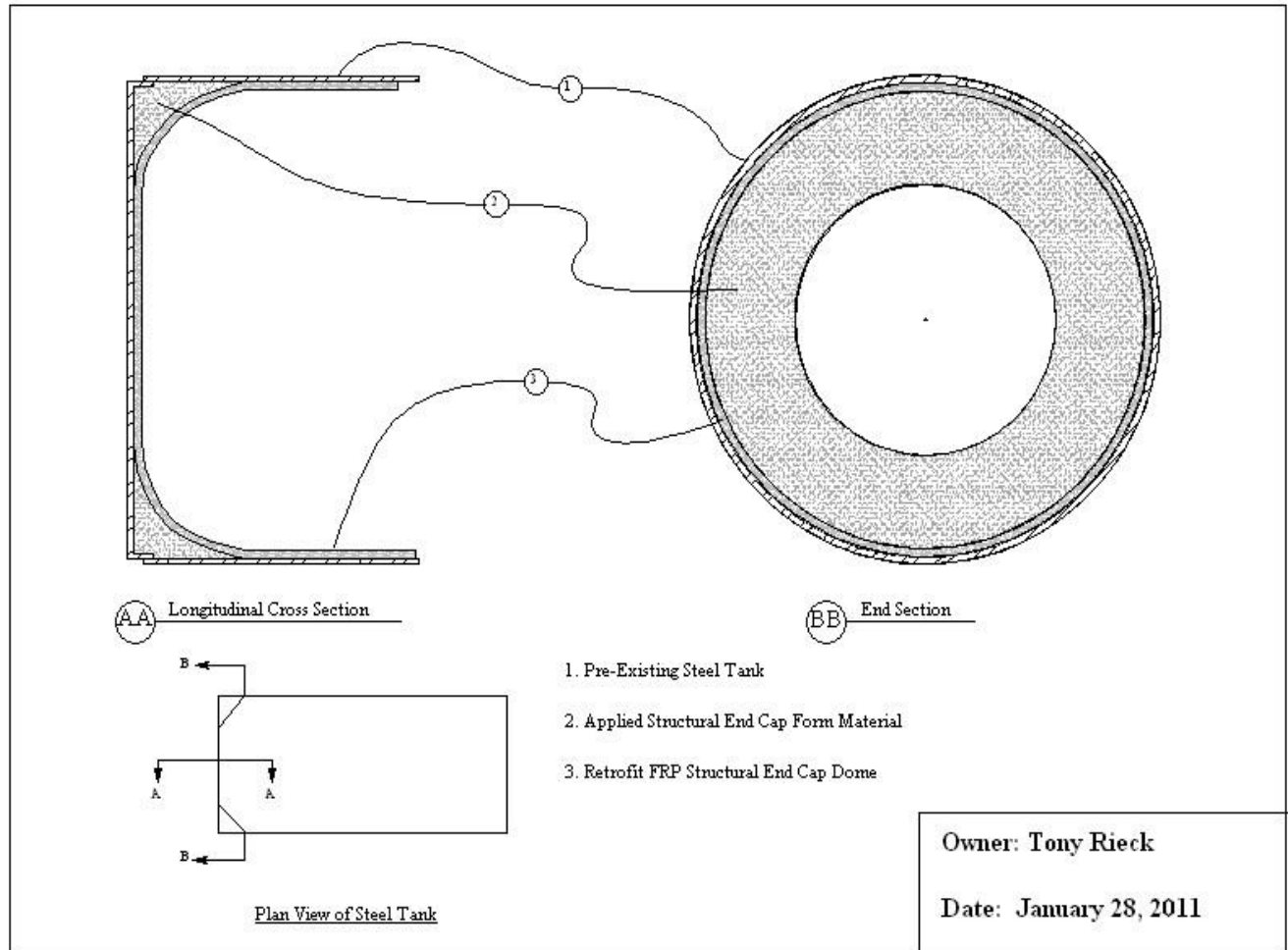
Tank Photographs

### **Figure 1. External View of Tank**

The laminate used is a double walled material with structural fiberglass reinforced resin material on either side of the formed interstice. The end cap (head) design is akin to inserting a FRP tank end cap into the steel tank. Thus, there is a space which is not a part of the primary or secondary containment that is created around the circumference of the tank at the end cap (see attached drawing).



**Figure 2. Drawing of the end cap design**



**Figure 3. Interior of Tank Showing Monitoring Tube**



**Figure 4. Interior of Tank Showing Manway and monitoring tube.**



# Ken Wilcox Associates, Inc.

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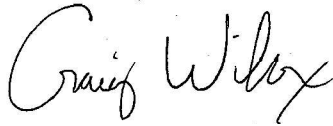
1125 Valley Ridge Drive  
Grain Valley, Missouri 64029  
Voice (816) 443-2494, Fax (816) 443-2495  
E-mail: [cwilcox@kwaleak.com](mailto:cwilcox@kwaleak.com)  
Web: <http://www.kwaleak.com>

May 18, 2018

To whom it may concern,

KWA has reviewed information provided by Poly Lining Systems, Inc. on the base resin used to formulate the PLS 360e tank lining material and the table included on the PLS "Material Compatibility with Motor Fuels" is the test data from immersion testing conducted by Underwriters Laboratories (UL) to determine compatibility with motor fuels.

Sincerely,

A handwritten signature in black ink, appearing to read "Craig Wilcox". The signature is fluid and cursive, with the first name "Craig" and last name "Wilcox" clearly distinguishable.

Craig Wilcox, President  
KWA, Inc.

[illegible]

# Ken Wilcox Associates, Inc.

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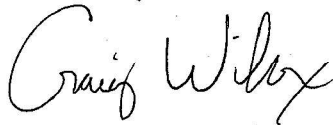
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E-mail: [info@kwaleak.com](mailto:info@kwaleak.com)  
Web: <http://www.kwaleak.com>

June 12, 2020

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Craig Wilcox, President  
KWA, Inc.



## ACKNOWLEDGEMENT OF LICENSING AGREEMENT

Delta Composite Systems, LLC (hereinafter referred to as "DCS"), a duly organized Limited Liability Company formed under the laws of the State of New Hampshire, USA, hereby acknowledges a licensing agreement between itself and Poly Lining Systems, Inc. (herein referred to as "PLS"), a duly organized Incorporated company formed under the laws of the State of New Hampshire, USA, for international distribution and sub-licensing rights of the DCS proprietary technology, methodology, work craft, use of system names, proprietary materials and related products used to perform the field installation and commissioning of its Genesis Double Wall Tank Upgrade System. DCS further acknowledges the following:

A confidential agreement, in the form of a binding contract, exists between both parties (DCS and PLS), and;

Such agreement stipulates that PLS has the sole and exclusive rights to sub-license the Genesis System to all areas of the world outside of the United States and it's legal territories, and;

Such sub-licensing process shall be at the sole discretion of PLS, autonomous and separate from DCS.

Acknowledged by R.M. Pearlman, Managing Member, Delta Composite Systems, LLC, the 10<sup>th</sup> day of February, 2016.

SIGNED: \_\_\_\_\_

State of New Hampshire

County of Belknap

This instrument was acknowledged before me on the day of 2-10-16, by

Ron Pearlman

Heather Jewell  
(Signature of notarial officer)

(Seal)

Notary Public, State of New Hampshire **HEATHER JEWELL, Notary Public**  
My Commission Expires November 6, 2018

My commission expires: \_\_\_\_\_

## ACKNOWLEDGEMENT OF LICENSING AGREEMENT

Delta Composite Systems, LLC (hereinafter referred to as "DCS"), a duly organized Limited Liability Company formed under the laws of the State of New Hampshire, USA, hereby acknowledges a licensing agreement between itself and Poly Lining Systems, Inc. (herein referred to as "PLS"), a duly organized Incorporated company formed under the laws of the State of New Hampshire, USA, for International & Domestic distribution and sub-licensing rights of the DCS proprietary technology, methodology, work craft, use of system names, proprietary materials and related products used to perform the field installation and commissioning of its Genesis Double Wall Tank Upgrade Systems. DCS further acknowledges the following:

A confidential agreement, in the form of a binding contract, exists between both parties (DCS and PLS), and;

Such agreement stipulates that PLS has the sole and exclusive rights to sub-license the Genesis System to all areas of the world, including within the United States and it's legal territories, and;

Such sub-licensing process shall be at the sole discretion of PLS, autonomous and separate from DCS, and;

The term of the agreement between DCS and PLS is 50 years, commencing on June 6<sup>th</sup>, 2020, and terminating on June 6<sup>th</sup>, 2070, and;

The licensing agreement perpetually renews for additional periods of 20 years, automatically, unless either party to the agreement notifies the other party, in writing, at least 180 days prior to the expiration of the initial term or any subsequent current term of the agreement.

Acknowledged by Rob Pearlman, Managing Member, Delta Composite Systems, LLC, the 6th day of June, 2020.

SIGNED: \_\_\_\_\_

State of New Hampshire

County of BELKNAP

This instrument was acknowledged before me on the day of JUNE 18, 2020, by

ROBERT PEARLMAN

Colleen P. Casey COLLEEN P. CASEY  
(Signature of notarial officer)

(Seal)

Notary Public, State of New Hampshire

My commission expires: 12/5/2023





75-4 Main Street, Suite 300  
Plymouth, NH 03264

### COMPATABILITY STATEMENT

In accordance with the compatibility affirmation requirements of 40 CFR Part 280.32, Poly Lining Systems, Inc. as the manufacturer of the Genesis Double Wall Tank Retrofit System approves the use of the Genesis Double Wall Tank Retrofit System for the storage of the following ranges of biofuels and alcohol blended fuels based upon a review of test performance data:

Biofuels - all biofuel blends from B5 to B100.

Alcohol blended gasoline fuels - 0% Ethanol to 30% Ethanol (inclusive) and Ethanol blends 60% or greater.

The above are in addition to demonstrated compatibility for use with all gasoline and fuel oil motor vehicle fuels and aviation fuels.

If you have any further questions regarding compatability of the Genesis system, please contact our office.

Respectfully,

*Jeff Colner*

Jeff Colner  
VP - Operations