



UST Sump Leak Repair



Paul Reber, National Sales & Technical Support Manager





Our purpose is to help site owners and their service contractor return their fuel storage containment sumps to compliance with regulatory expectations.



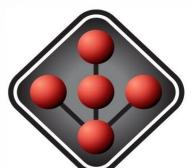


From this...

to this.



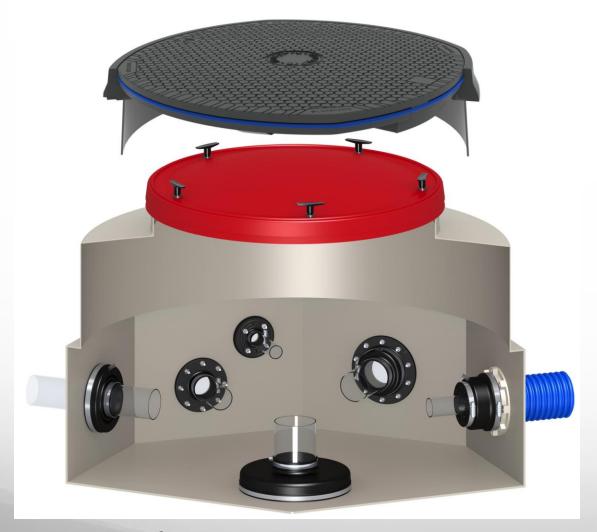




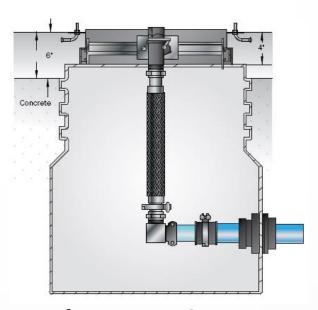




What are we talking about?



Tank & Transition Sumps



Dispenser Sumps



Spill Containment



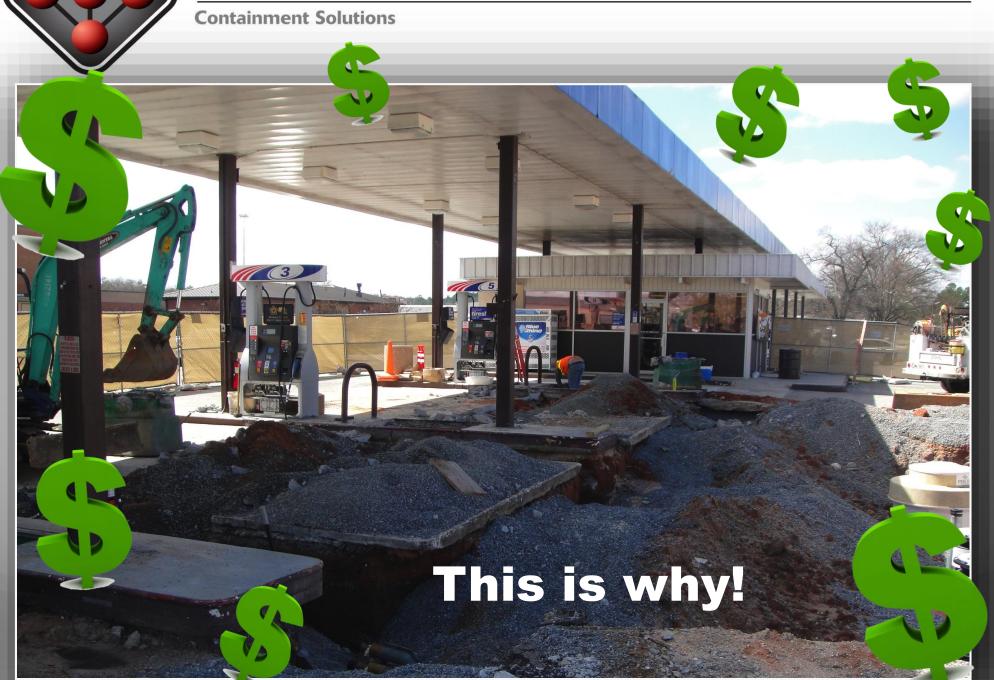


Why repair at all?

Why not just shut the site down and dig everything up and replace it?



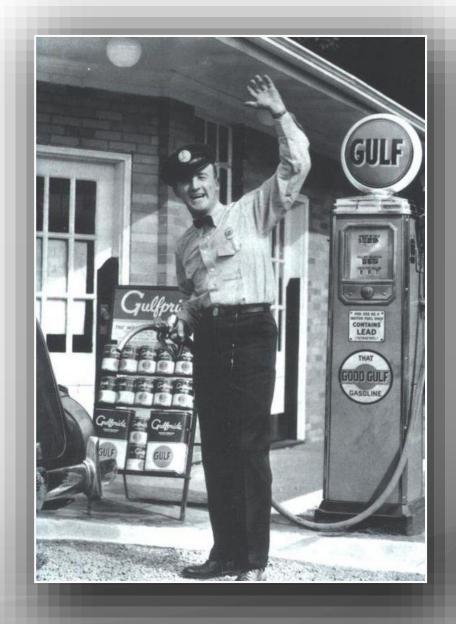








Has petroleum equipment, workmanship standards, environmental regulation, and sump repair evolved over the past 30 years?







You bet!









Well, at least the parts and materials have evolved!







Yes, repair applications have evolved through much trial and error.

A lot of different things have been tried... that probably shouldn't have!





Frankenstein







The Bride of Frankenstein







Rotten Ronnie







Dr. Goop-n-Smear!







NON-Stick Sealant







Flock of Duct... Tape







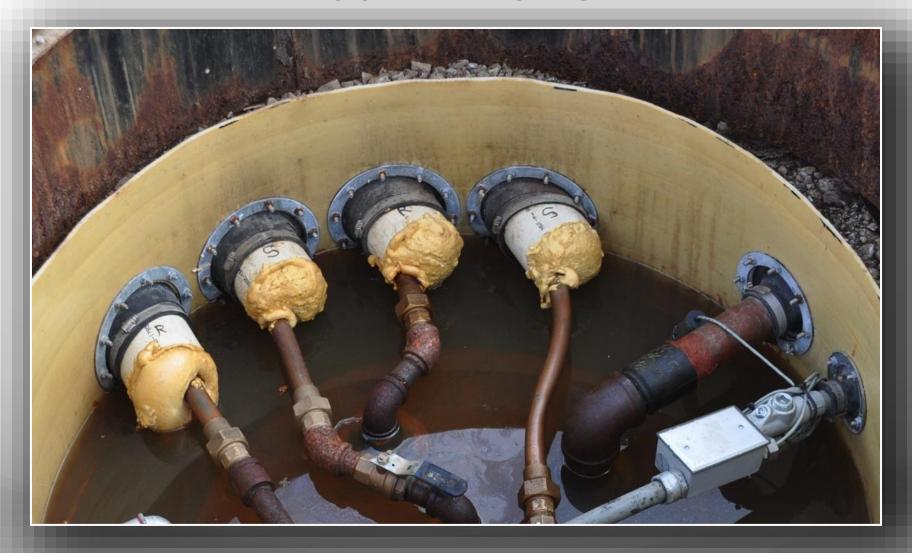
Tape & Foam







Foam Alone?







The Blob! (AKA Bostik Bomb)







The Sequel... Blob Twins!







Secondary, Secondary Containment?







After all of that, you just want to...







What can repair look like today?





Is it all repairable?







Considerations:

- 1. Is it repairable or too far gone?
- 2. What is the right application for the circumstances?
- 3. Can good workmanship be attained?
- 4. Will the materials last through the "end life" of the existing sump structure and beyond testing periods?
- 5. Will it meet regulatory requirements?





Fitting Repair







SplitRepair Fittings

- 1. No Disconnecting pipe or excavation required, sump replacement
- 2. Matches all existing fitting manufacturer designs
- 3. Compatible & durable materials for the respective applications
- 4. 3rd-Party tested and proven effective



















Before









Before

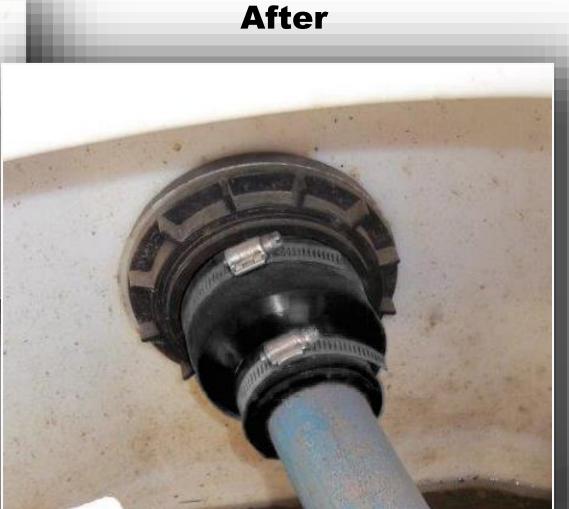








Before







Before

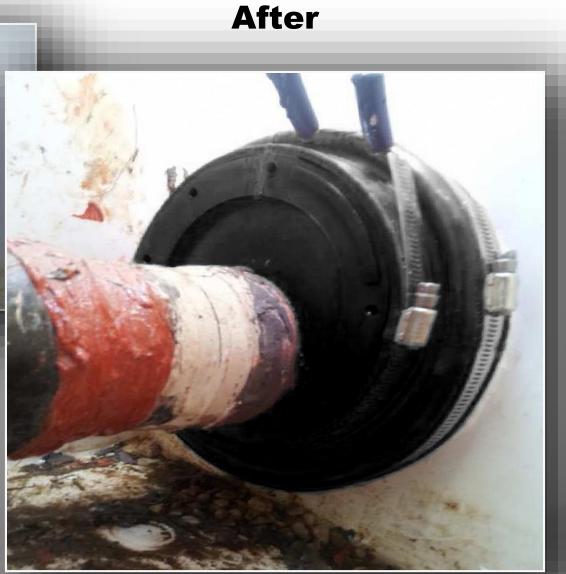


















Before









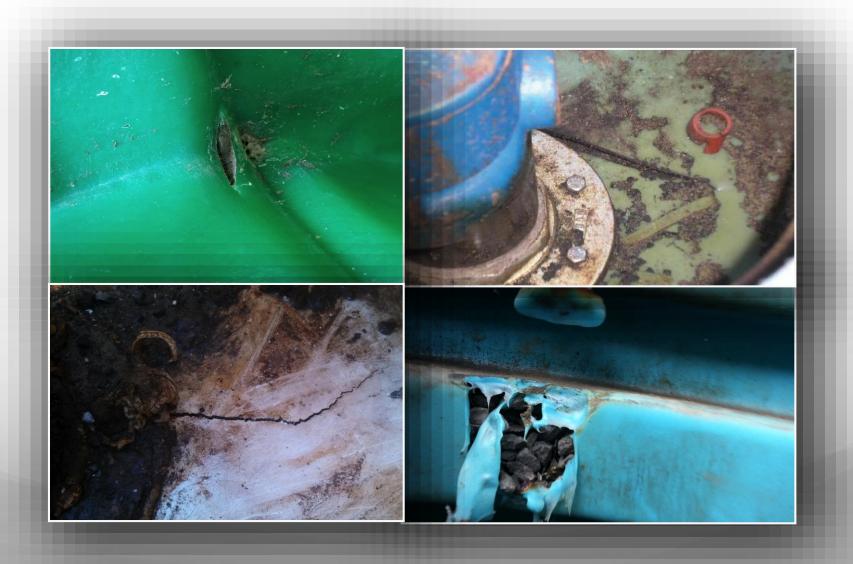
Before







Sump Structure Repair





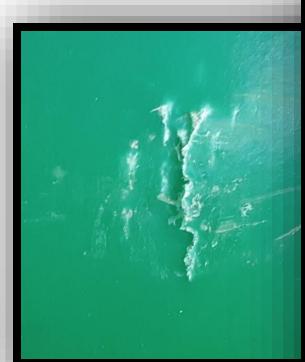


There is a major difference between "adhesive sealants" and "structural adhesive bonders"





After



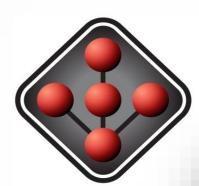
Before











icon



Containment Solutions





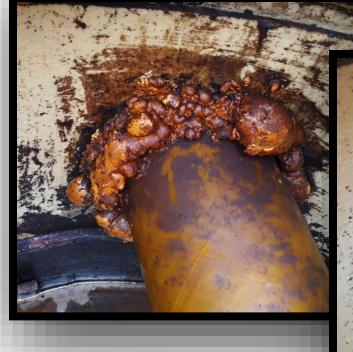












Before



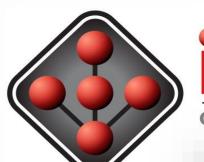




Sump Lid Repair







icon



Containment Solutions

















After

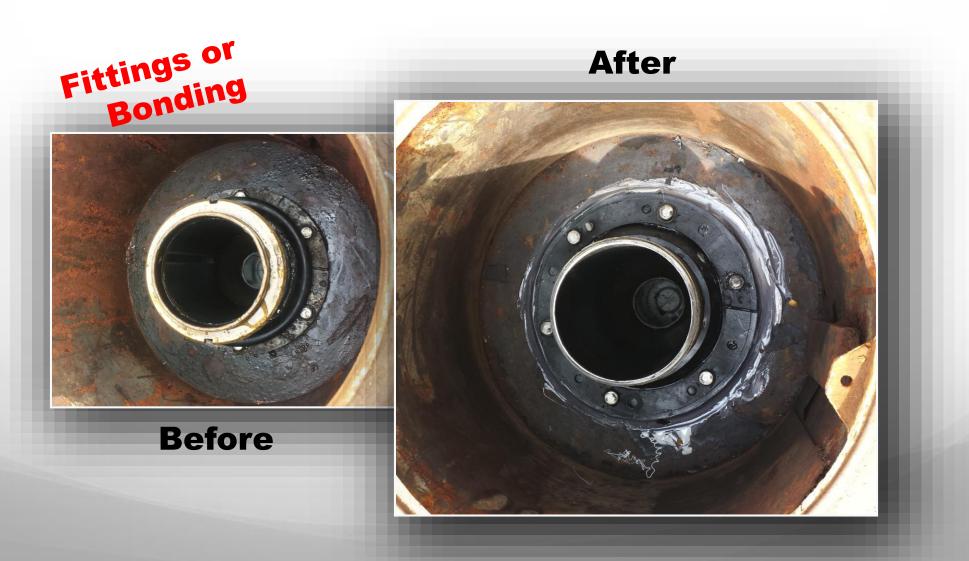








Spill Containment Repair





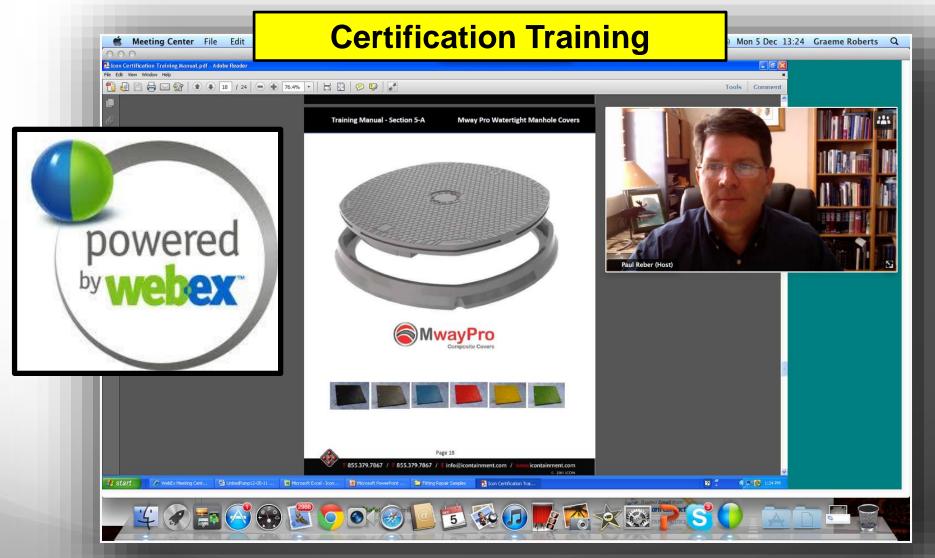


Workmanship challenges addressed through:

- Certification Training
- Technical Support
- Parts Specification Services
- On-Site Training

















er < paul@icontainment.com>

techsupport@icontainment.com



FW: Easy food mart pics 2 of 3 yalaha fl

Paul Reber <paul@icontainment.com> Tue, Sep 30, 2014 at 11:09 AM

To: Bill Hauck <BillHauck@adamstank.com> Bcc: Capsule Contacts for Icon <dropbox@98804957.icontainment.capsule.crm.com>

If the product pipe is 1.5" OPW, then the parts are as follows per your pictures:

(2) ISR 5.5x2.0 - Split-Reducer Repair Fitting 5.5" x 2.0" - \$49 List

(4) ISR 3.5x1.4 - Split-Reducer Repair Fitting 3.5" x 1.4" - \$42 List

(4) IRI 1.4x1.0 - Split-Reducing Insert 1.4" x 1.0" - \$17 List

(1) IAC FastFuse - Solit fitting Bonding Solvent, 4oz Can - \$75 List

(1) IAC Sika10 - Sikaflex Fitting Sealant, 10oz Tube - \$9 List

* See attached installation instructions for BL fitting replacement boots.

Please determine the accessibility and feasibility of the installation, and confirm the accuracy of measurements, sizes, and applications before you order or attempt to install these parts.

Knowledge about the installation of these parts and materials is important to success of the application. Icon Installer Certification Training is free of charge and available every week at 7:00 am PST on-line through the WebEx meeting program. Registration is required, so please visit our website "Training" page at http://icontain.ment.com/training/. Icon training satisfies a certification condition of our warranty. If training is needed, please contact us.

Remember that glues, bonders, sealants, and fillers are not returnable. We have made every effort to estimate an appropriate volume of any material above. Also, any part that is labeled "custom" is not returnable. Unused, resell-able fittings may be returned within 90 days for an account credit and are subject to a 25% restocking fee.

Thank you for your inquiry. Please contact us if you have any questions about our products or this quote.

Paul Reber National Sales Manager 480.748.3590 Cell

"Top to Bottom - Containment Leak Problems Solved"



ph / fx 855.(DRY.SUMP) 379.7867 www.icontainment.com



Visit Icon at PEI Booth 6908

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The importance of "3rd-Party" Testing for Durability & Compatibility

But don't discount experience & Testing of the Manufacturer





CERTIFICATE OF COMPLIANCE

Certificate Number Report Reference

20160223-MH28727 MH28727-20040105 2016-FEBRUARY-23

Issue Date

Issued to: ICON CONTAINMENT SOLUTIONS L L C

UNIT D1 905 N MAIN ST

N SALT LAKE UT 84054

This is to certify that representative samples of TANK ACCESSORIES FOR FLAMMABLE AND COMBUSTIBLE LIQUIDS

Sump penetration fittings, reducers, three stepped flanged reducers and inserts. Split repair sump penetration fittings, reducers, three stepped flanged reducers and inserts.

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety:

UL 971 - Nonmetallic Underground Piping for Flammable

Liquids

Additional Information:

See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service

Look for the UL Certification Mark on the product.



December 21, 2015

RE: Sump Leak Repair Products Compatibility Statement

This letter is to certify the compatibility of Icon Containment Solutions manufactured sump leak repair products to all ASTM Methanol blended fuels, Ethanol blended fuels from E10 to E100, Biodiesel blends from B2 to B100, and DEF diesel exhaust fluid typical in fuel storage containment sump applications; and covers all Icon's SplitRepair sump repair fitting designs, sump structural repair bonders and patches, and replacement tank sump lid products used in restoring UST/AST containment tank, spill, transition, and dispenser sumps to a compliant, fuel-tight condition.

Icon's repair fittings are engineered and manufactured with UL listed materials that offer the greatest durability for in-sump application, and have been third party tested (UL and other testing sources) for both material and simulated use compatibility in combination with split-bonding solvent (Icon FastFuse), gasket sealants (Icon PetrolSeal or Sika Corp Sikaflex 1a), filler material (Icon FastFill), and structural bonders (Icon iBond or Icon PolyFuse). Reference Icon product information sheets for specific labels and details as applicable.

Additional successful testing with these products has included prolonged exposure to High Density Hydrocarbons: Ozone: UV: High & Low-Temperatures: Water Saturation: Tensile Strength: Flexibility & Compression; Microbial Corrosion; and Vibration Stress.

If you have a need for any additional information, or have any questions regarding this statement or specific products, please contact us at (855) 379-7867 (Dry-Sump).

Jason Mitchell General Manager

ph & fx 855.DRY.SUMP

905 N. Main Street Ste D1 N. Salt Lake, Ut 84054





The "intended" vs "unintended" consequences of state regulatory language regarding repair?





"Per manufacturer's recommended procedure"







A recognized standard is being developed to cover the range of effective, and valid repair applications









Objectives of a UST Secondary Containment Sump Repair Recommended Practice

- Provide a recognizable RP to regulators, site owners, and contractors;
- Define general minimum workmanship and material/application standards;
- Allow for competitive product variances;
- And meet regulatory criteria for compatibility of materials and 3rd-party testing





At minimum, the RP will cover:

- How to address active water intrusion into the containment sump prior to repair;
- Define the general and reasonable "repairable" definitions;
- Establish protocols for various sump fitting repairs;
- Define possible sump structure damage repair applications;
- And explain tank sump lid replacement





RP Development Process will include bringing Manufacturer,
Association, Competitor, and Regulator representative stakeholders together for comment





Ultimately, the objective is to allow for a more cost effective alternative in repair solutions vs expensive, site & customer disruptive re-construction, unless its required.





From this...

to this.



