THE REALITY AND CHALLENGE OF SUMP INTEGRITY TESTING

CROMPCO

COMPLIANCE WITHOUT COMPROMISE™

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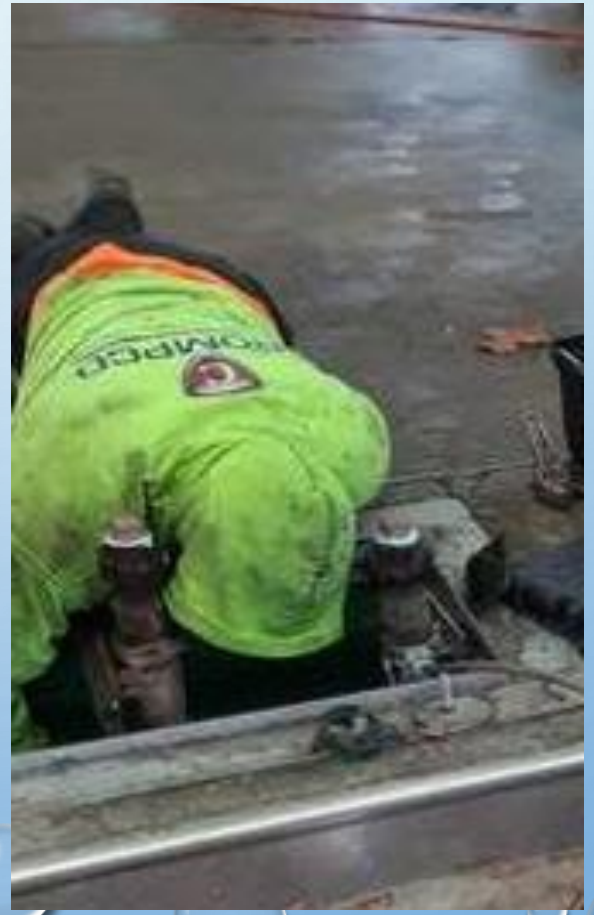
WHAT ARE THE CHALLENGES?

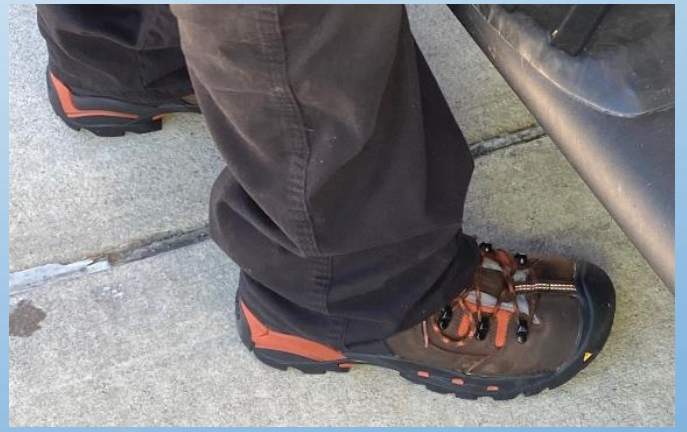
1. Hiring
2. Preparing and Gearing Up
3. Planning
4. Performing the work
5. Documenting and Reporting
6. Disposal of test water
7. Dealing with Failures

HIRING

- Cannot hire and assign anyone to perform this work
- Must be knowledgeable of UST Systems
- May be required to obtain and hold state certifications
- May be required to obtain and hold manufacturer certifications
- Must be trained on SAFETY!
  - Confined Space Entry
  - LOTO
  - PPE
  - Barricading



THINK SAFETY!



PREPARE

- What method does the customer require?
- Are there any state or local requirements?

GEARING UP

- How to get the water to the site for testing
- How to add the water to the containments for testing
- How to remove the water from the containments after testing
- How to remove the water from the site
- For methods other than hydrostatic testing make sure to reach out to the manufacturer and carry all recommended equipment

WATER WAGONS

WATER WAGONS

PROS AND CONS OF WATER WAGONS

PROS

- TRANSPORT ALL WATER AND EQUIPMENT TO SITE
- ASSISTS WITH BARRICADING
- CARRY UP TO 800+ GALLONS OF WATER
- EASILY FILLED
- CAN BE USED AS A VACUUM TO REMOVE WATER
- EASY OFFLOAD OF CONTAMINATED WATER

CONS

- TRAINING TECHNICIAN HOW TO TOW A TRAILER
- BREAKDOWNS PROVE TO BE COSTLY
- SOME SITES HAVE LIMITED SPACE MAKING MANEUVERING DIFFICULT

EQUIPPING WATER WAGONS

WHAT EQUIPMENT IS NEEDED?

FILLING THE WATER WAGON

ONLY FILL WITH CLEAN WATER

OTHER HYDRO TESTING SOLUTIONS

CONCERNS

- DOES THE SITE HAVE WATER
- DO I HAVE ENOUGH HOSE
- LENGTH OF TIME TO FILL CONTAINMENTS
- HOW TO REMOVE WATER AFTER TESTING FROM THE CONTAINMENTS
- HOW MANY CONTAINMENTS WILL BE ABLE TO BE TESTED AT A TIME
- WILL THE WATER ARRIVE TO SITE ON TIME

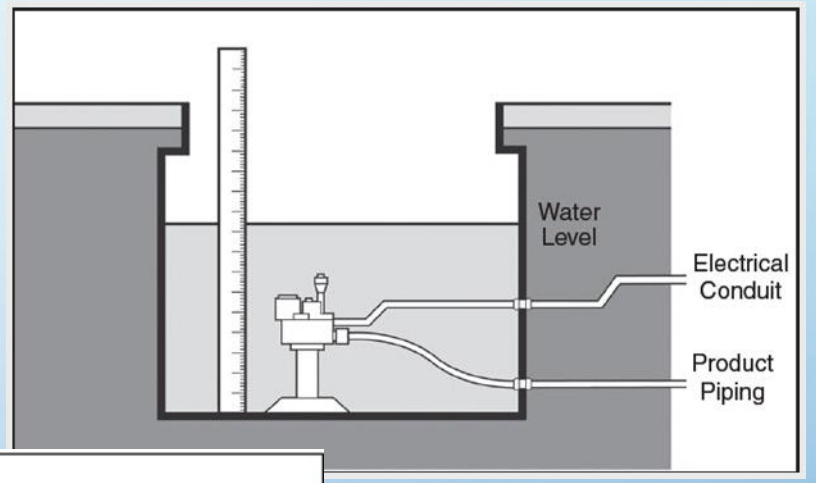
PLANNING

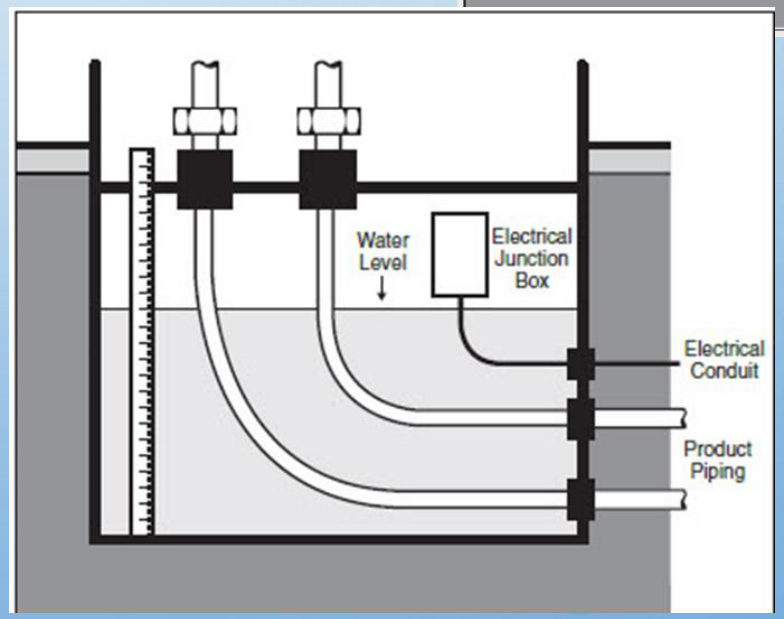
- Use of fresh water to start the week
- Approximate time to complete the site
- Best approach to complete the site without disrupting on site operations
- Site specific safety concerns
- How many sites can I test with this water
- Where and how to dispose of test water when needed

HYDRO TESTING CONTAINMENT SUMPS/UDCS

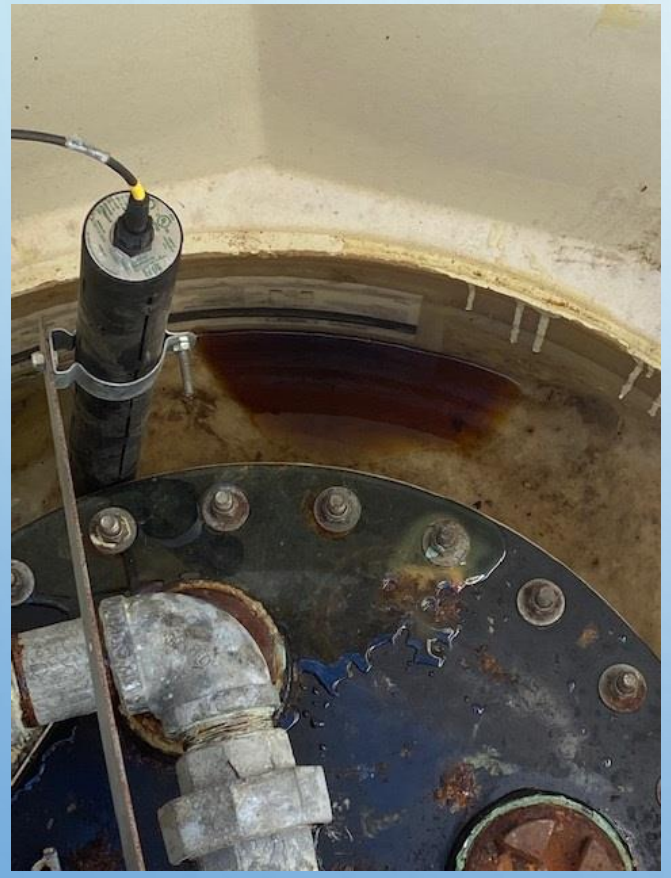
PEI RP 1200 CONTAINMENT SUMP TESTING: HYDROSTATIC

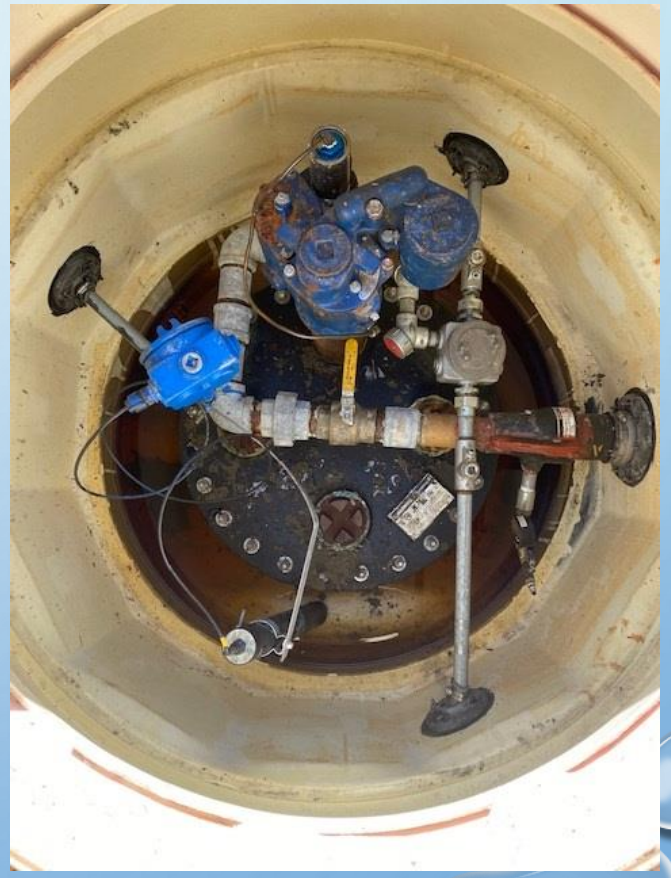
- Clean, inspect, and repair defects
- Fill with water to 4” above the highest penetration or sidewall seam
- Measure water depth to within 1/16 inch
- Wait one hour
- Water level must drop less than 1/8 inch to pass





CHECK FOR FUEL AND REMOVE





CHECK FOR DEBRIS AND REMOVE

INSPECT BEFORE TESTING

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BEFORE FILLING

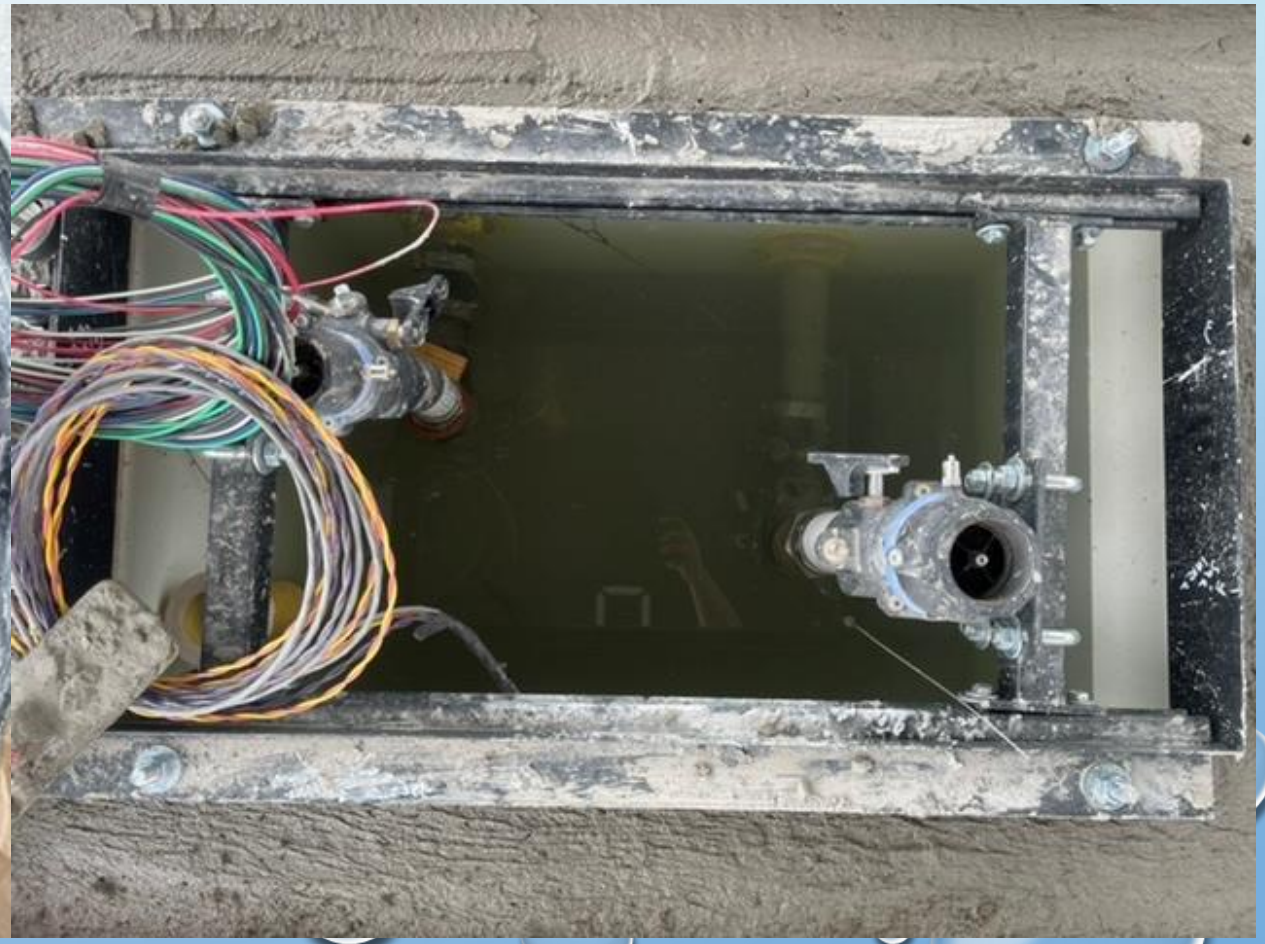
BEFORE FILLING

BEFORE FILLING

MEASURE

MARK

FILL CONTAINMENT TO REQUIRED LEVEL



LET SETTLE

DOCUMENT WATER LEVEL

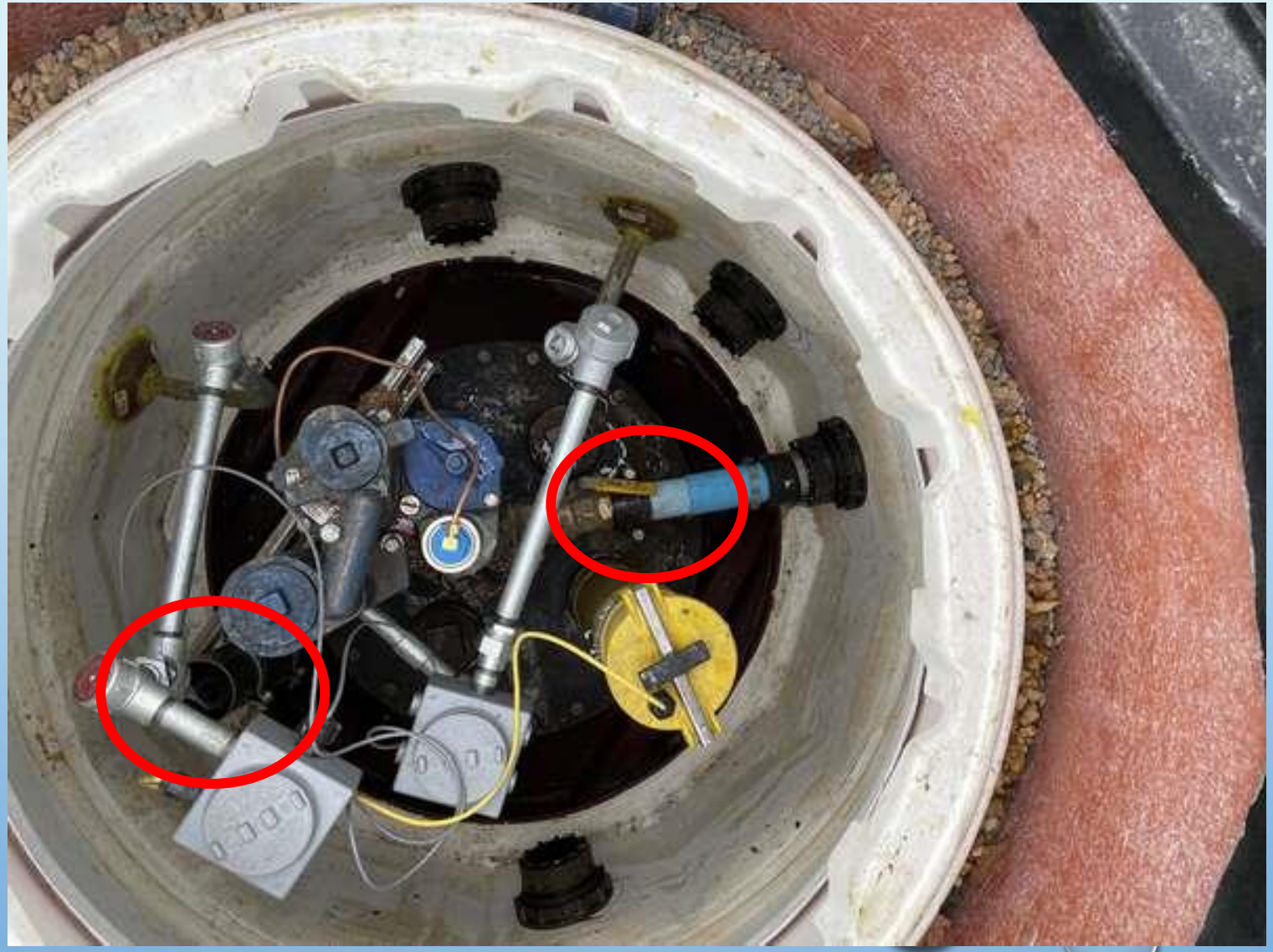
HYDRO TEST DURATION

- Test for 1 hour
- Perform visual checks on hydro test several times
- Attempt to not disturb water in containment

AFTER 1 HOUR

- Document ending water level measurement
- Remove all water and leave containment clean & dry
- Reinstall sensors
- Return secondary test boots to pre-test position

VERIFY



PASS OR FAIL

Water level changed less than 1/8 inch

Water level changed 1/8 inch or greater

Document and Report

APPENDIX C-4

CONTAINMENT SUMP INTEGRITY TESTING HYDROSTATIC TESTING METHOD

Facility Name:			Owner:			
Address:			Address:			
City, State, Zip Code:			City, State, Zip Code:			
Facility I.D. #:			Phone #:			
Testing Company:			Phone #:		Date:	
This procedure is to test the leak integrity of containment sumps. See PEI/RP1200, Section 6.5 for the test method.						
Containment Sump ID						
Containment Sump Material						
Liquid and debris removed from sump?*	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Visual Inspection (No cracks, loose parts or separation of the containment sump.)	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail
Containment Sump Depth						
Height From Bottom to Top of Highest Penetration						
Starting Water Level						
Test Start Time						
Ending Water Level						
Test End Time						
Test Period (Minimum test time: 1 hour)						
Water Level Change						
Pass/fail criteria: Must pass visual inspection. Water level drop of less than 1/8 inch.						
Test Results	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail

Comments:

PEI RP 1200 Sample Form

*All liquids and debris must be disposed of properly.

Tester's Name _____ Tester's Signature _____

CAN IT BE RE-USED

YES

CAN IT BE RE-USED

NO

CAN IT BE RE-USED

NO

DISPOSAL OF TEST WATER

TRAILER USED FOR TEST WATER STORAGE AND DISPOSAL

EMPTYING OF STORAGE TRAILER

REMOVAL OF WATER ON SITE

TEMPORARY STORAGE OF WATER IN DRUMS

WHAT TO DO WITH THE FAILURES

- Over 95% of the time, the most common cause of sump test failures is due to failed penetration boots or piping interstitial (secondary) boots
- Rare that structural repairs are needed

CONTAINMENT REPAIR

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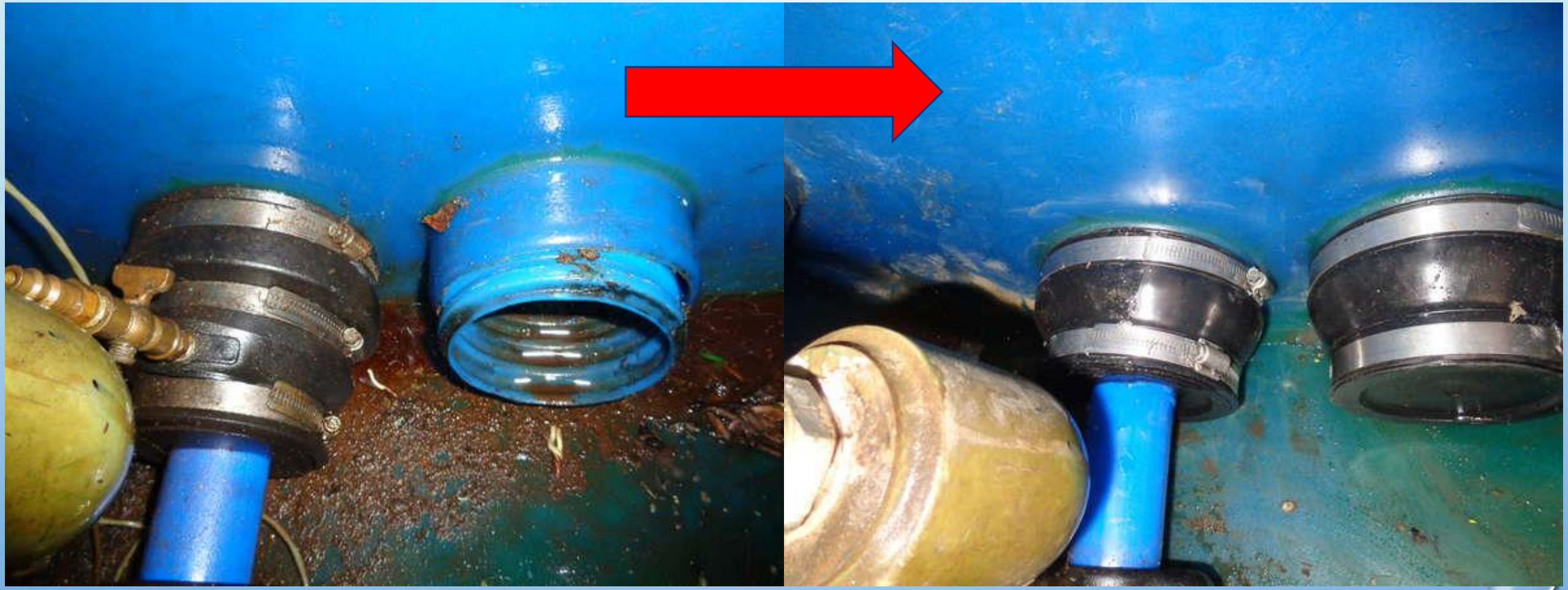

CONTAINMENT REPAIR

CONTAINMENT REPAIR

Thank you!