



This is what Dispensers should look like...





But this is why we need the components in the next slides...







# Shear Valve, AKA Crash Valve, AKA Fire Valve...







## More Shear Valves....







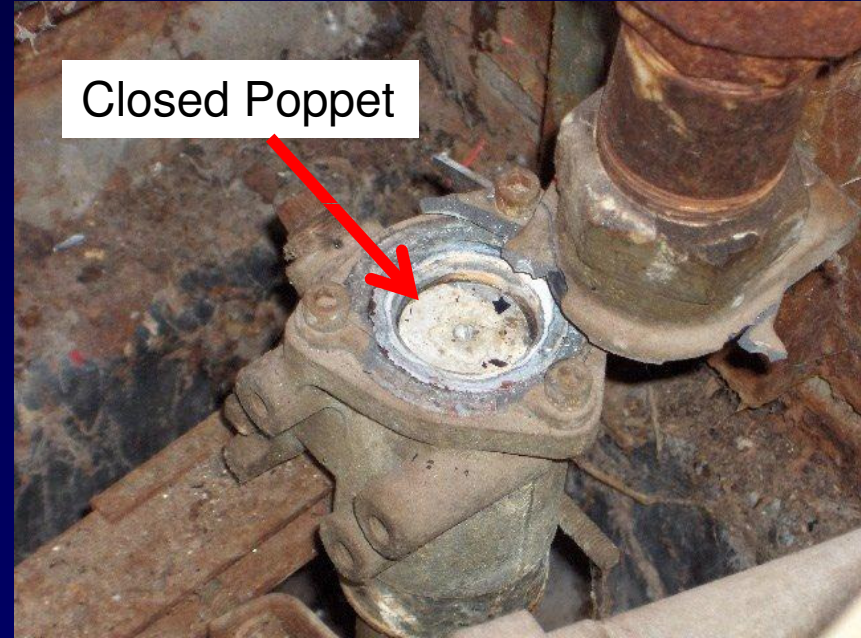
## More Shear Valves (We're not sure what the highlighter & vice grips are rated for)







# Broken Shear Valves...

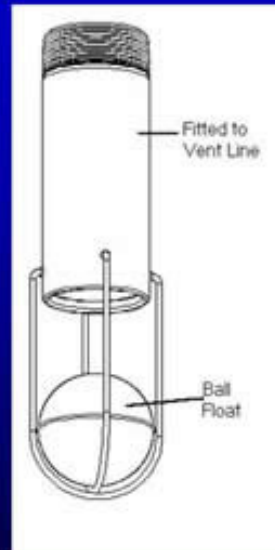






# One Kind of Overfill Prevention Device...

## Ball Float Valves







# The Other Kind of Overflow Prevention Device...



**Flapper  
Valves**





And in case the Fuel Truck Driver is  
inside his cab sleeping...









## From the Veeder-Root Website:

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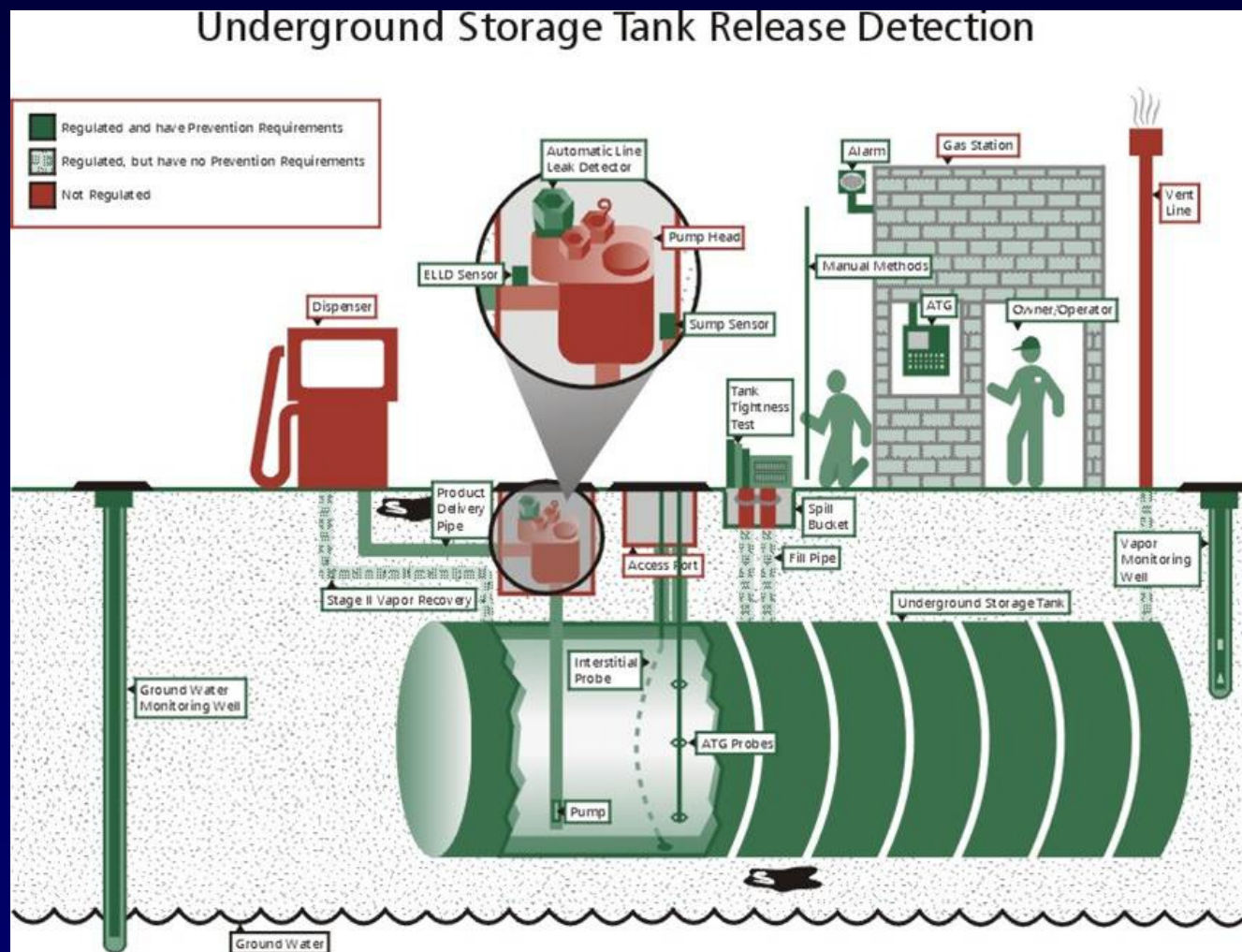
The TLS-350 is the most widely installed tank gauging solution in the world. Designed for retail and commercial operations wanting the flexibility to choose compliance and fuel management features for their individual operation. Offers the benefits of in-tank inventory, proven leak detection, complete compliance, and the ability to upgrade with additional connectivity for optimum flexibility – all with the reliability that only comes with more than a half million tank installations worldwide.

- **Key features:**
- Continuous inventory monitoring and reporting
- Flexibility to choose the compliance and fuel management features right for you
- Leading-edge leak detection technology as an upgrade option
- SiteFax capability to allow you to send multiple reports across multiple fax lines on a programmed schedule that you set



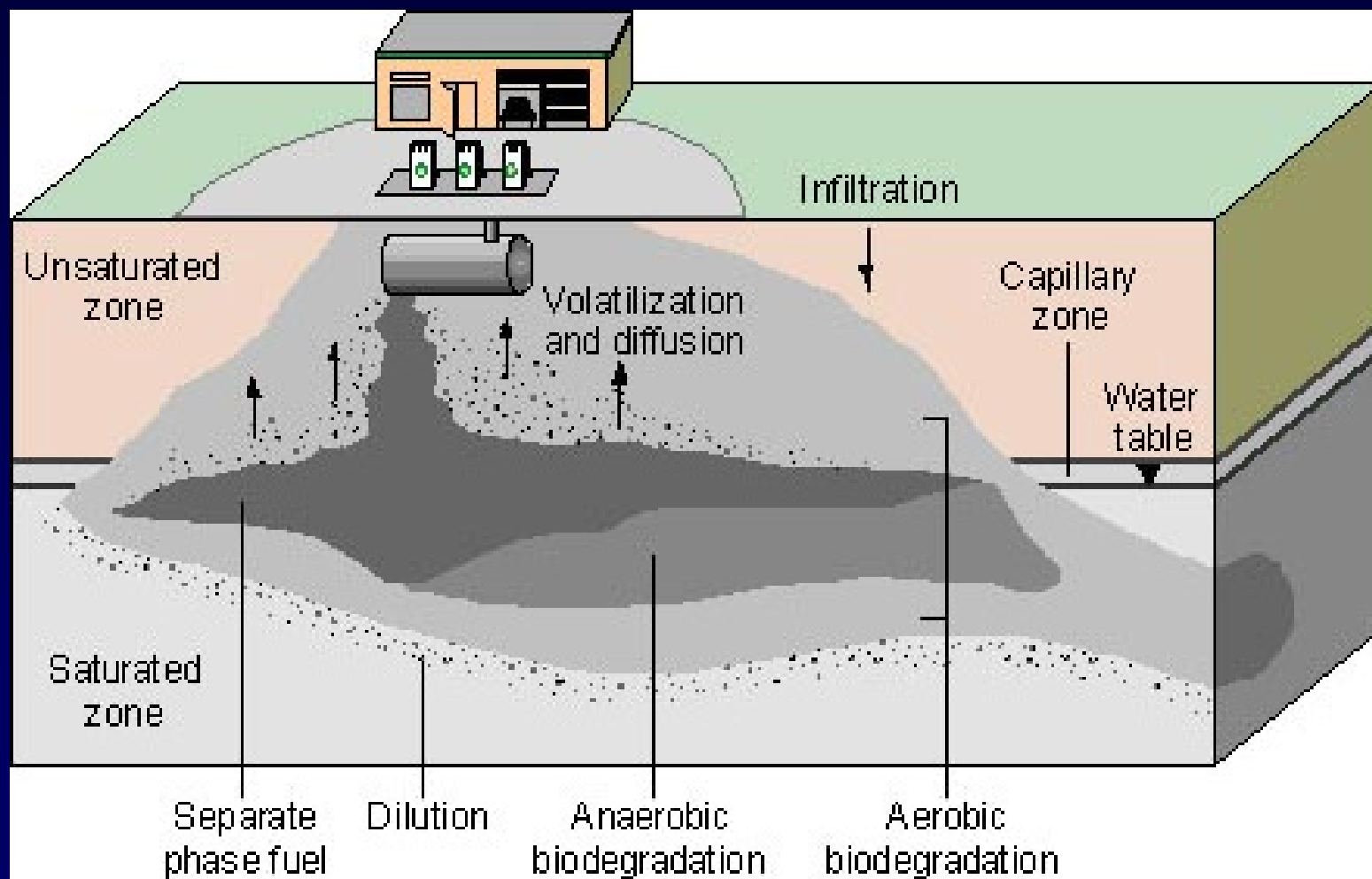


# UST Leak Detection System at a Glance





# This is why we need all that equipment







And this is one way the stuff gets out – corrosion holes





# Portable Fire Extinguishers

- Attended SS must have at least 2 extinguishers rated 4A:60BC.
- Unattended SS need 1 extinguisher at each island and at the E-Stop.
- USS may also have a Suppression System.
- “Standard for Portable Fire Extinguishers” NFPA 10 (2007) incorporated by reference.







# Noncompliant Extinguisher Location





# What you might see with violations or noncompliance








No fuel can be delivered to any UST  
if there is not a valid Green Decal








# No fuel can be dispensed without a valid MFD Permit for the type of facility operating



Office of the Illinois State Fire Marshal  
Division of Petroleum and Chemical Safety  
1035 Stevers on Drive  
Springfield, Illinois 62703-4259



## Underground Storage Tank Motor Fuel Dispensing Permit

Select...

Expiration Date: _____	Facility Number: _____
<u><b>Name and Address of Owner</b></u>	<u><b>Name and Address of Facility</b></u>
_____ Name	_____ Name
_____ Street Address	_____ Street Address
_____ City                      State      Zip	_____ City                      State      Zip      County

*This permit may be revoked by the State Fire Marshal for failure to comply with OSFM requirements. This permit does not authorize or permit operation in a manner inconsistent with any local statutes, zoning requirements, ordinances, or other local regulations. This permit must be prominently displayed at the facility.*

☐ Click here to sign this section

Storage Tank Safety Specialist (Signature)  
Office of the Illinois State Fire Marshal



## Other UST Activities Inspected: Installations & Decommissioning

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- In addition to local building codes, MFDFs must also pass a permit application review:
  - New Facility
  - New dispensers/islands/tanks
  - Significant Upgrades to UST components or safety equipment
  - Change to a different type of MFDF
  - Repairs to UST components





# Requirement for UST Contractors to be OSFM Licensed

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- Statutory Basis for our contractor rules: Petroleum Equipment Contractors Licensing Act (PECLA) [225 ILCS 729]
- State Regulations are at 41 IAC 172
- UST Contractor Licenses cover 5 Modules:
  - Tank Tightness Testing
  - Install/Retrofit
  - Cathodic Protection
  - Decommissioning
  - Lining



# Types of UST Construction







# Fiberglass Reinforced Plastic: FRP





# New UST Installation Site







## More New Installation: Under Dispenser Containments (UDCs)





## Inspection of Tank(s), Piping, Site

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- Inspect Tank and piping for any damage from shipping
- Verify all equipment as specified on permits & by regulations (2-wall)
- Verify layout & placement conforms with site drawing
- Is excavation safely sloped or shored?
- Is anchoring installed for tank(s)?



# This is why you anchor your USTs







Side View of the same USTs...Yes,  
that is concrete!





## Air Tests; Hydrostatic Tests

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- Tank(s) interstice tested for air tightness
- Pipe interstice tested for air tightness x 2
- Containments & Sumps tested for water tightness
- Verify Overfill Prevention Devices
- Verify proper venting
- Return for a complete Certification Audit before a Green Decal & MFDF are issued



# UST Removals, AKA Decommissioning: BIG TANKS







# Trackhoe rolling, not lifting the BIG TANK





# small tank Removal







# What Water & Ground Electrical Currents can do to 7/16" Steel







# Wrapping Things Up...

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## ***P&CS Mission Statement***

***... to protect against threats to human safety and contamination of the environment that can occur by the underground storage of petroleum products and other hazardous substances through prevention, education and enforcement.***



# Prevention

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- Establish UST Rules, Regulations & Requirements
- Review applications for permits to install, repair, improve and remove USTs and equipment
- Inspect equipment and work on job sites, supervise safe work practices at UST installs & removals
- Inspect UST facilities every 2 years, and follow up on any violations



# Education

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- UST Contractor licensing, with mandatory OSHA training annually & mandatory module testing every 2 years
- Owners/Operators of UST facilities required to certify as A/B or C Operators every 2 years
- Field & Office Staff continually answering questions and explaining regulations to contractors, owners/operators & public





# Enforcement

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- Notice of Violation written for noncompliance
- After 60 days of NOV period, continued noncompliance will result in UST(s) being Red Tagged
- Further noncompliance can result in Administrative Order to remove UST(s) from OSFM Legal Staff
- Continued noncompliance may end up referred to Illinois Attorney Generals Office, and possible civil or criminal penalties being assessed