

# UST Awareness Training for Tribal Personnel



Inter Tribal Council of Arizona, Inc.  
UST CATS Program





# Common Considerations

- Please turn off your cell phone or switch to vibrate
  - If urgent, please take your call outside.
- Minimize side conversations or texting





# Welcome and Introductions

- Participant Introductions
  - Name
  - Tribe/Agency
  - Job Title
  - What is your knowledge and experience with USTs?
  - What do you expect to learn today?



# Training Overview

- Inter Tribal Council of Arizona, Inc.
  - UST CATS Program
- UST Training Goals and Objectives
- History of USTs
- UST Federal Requirements
  - 40 CFR Part 280 – Outline
  - Financial Responsibility
  - Reporting and Recordkeeping
- UST systems
  - Definition of an UST
  - UST Owners/Operators
  - System components
- UST Awareness
  - Environmental and health dangers
  - UST compliance
  - Emergency Response
  - Benefits of awareness



# Inter Tribal Council of Arizona, Inc.



- Established on July 9, 1975
  - Non-profit organization to provide tribes with a united voice
  - 20 member tribes
  - 60 programs
  - Environmental Quality Programs, including UST CATS Program



# UST CATS Program

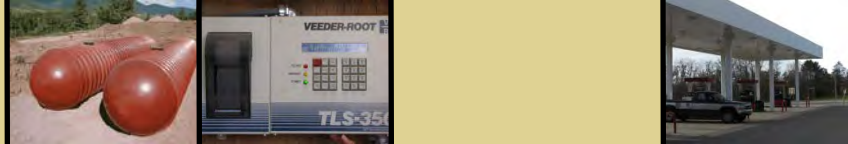
- Underground Storage Tank Compliance Assistance and Training Support (UST CATS) Program
  - Funded by EPA – OUST Program of Washington, D.C.
  - 5 years: 2009-2014, Cooperative Agreement with EPA
  - National program for all federally recognized tribes



# UST CATS Program

## Program Objectives:

- UST Compliance Training for Owners/Operators
- UST Awareness Training for Tribal Personnel
- UST Tribal Inspector Training
  - Module I: UST Installation
  - Module II: UST Operation and Maintenance
  - Module III: UST Decommissioning and Removal
  - Advanced Trainings
- UST Technical Advisory Committee
- UST Working Group Meetings



# Awareness Training Goals and Objectives

- Understanding UST regulations and systems
- Learning the dangers associated with USTs
- Protecting groundwater and tribal lands
- Protecting community members
- Making informed decisions regarding USTs by tribal personnel
- Educating our children



# Overview: History of USTs

1984:  
Subtitle I  
added  
to RCRA

1986:  
Subtitle I  
amended  
through  
Superfund

1998:  
Deadlines  
for UST  
upgrades

2005:  
Energy  
Policy  
Act of  
2005

2009:  
American  
Recovery  
And  
Reinvestment  
Act of  
2009



# UST History

Due to the health risks associated with USTs, Congress passed a series of laws to protect human health and the environment.

- 1984: Subtitle I was added to the Resource Conservation and Recovery Act (RCRA) through the Hazardous and Solid Waste Amendments.
- Created Federal Program to regulate USTs
  - Directed EPA to set operating requirements and standards



# UST History

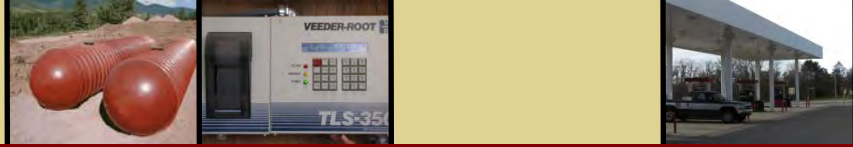
- 1986: Subtitle I was amended through the Superfund Amendment Reauthorization Act.
- EPA to respond to petroleum spills and leaks
  - EPA to establish financial responsibility requirements
  - Created a Leaking Underground Storage Tank (LUST) Trust Fund



# UST History

2005: Energy Policy Act of 2005 amended Subtitle I of the Solid Waste Disposal Act.

- UST provisions for States
- UST provisions for Tribes
  - Tribal Strategy: Strengthen the relationship between EPA and tribes; Improve information sharing; Enhance tribal capacity; and Further cleanup and compliance of USTs in Indian Country
  - Report to Congress on Implementing and Enforcing the UST program in Indian Country



# UST History

## 2009: American Recovery and Reinvestment Act of 2009

- Provided a one-time appropriation of \$200 million from the LUST Trust Fund to EPA for cleaning up leaks.
- \$190.7 million allocated to state/territories in the form of agreements to address LUST issues.



# Questions?





# FEDERAL REQUIREMENTS



# 40 CFR Part 280, Subparts A-I

Subpart A: Program Scope  
and Interim Prohibition

Subpart B: UST Systems,  
Design, Construction,  
Installation, and  
Notification of new UST  
Systems

Subpart C: General  
Operating Requirements

Subpart D: Release Detection

Subpart E: Release  
Reporting, Investigation,  
and Confirmation

Subpart F: Release Response  
and Corrective Action for  
UST Systems containing  
Petroleum or Hazardous  
Substances

Subpart G: Out-of-service  
UST Systems and Closure

Subpart H: Financial  
Responsibility

Subpart I: Lender Liability



# Key Point

40 CFR Part 280, Subpart E:

Any suspected or detected petroleum release must be reported within 24 hrs to an implementing agency by the UST owner/operator.



# FINANCIAL RESPONSIBILITY



# Financial Responsibility

Owner/operator must demonstrate financial responsibility to:

- Ensure the cost of clean-up for leaking USTs
- Compensate third parties for bodily injury
- Compensate property damage caused by LUSTs

FR depends upon:

- Type of business operation
- Amount of throughput of the tank
- Number of tanks



# Reasons for Financial Responsibility

\$



\$



\$



\$



\$



# FR Records and Demonstration

Owner/operator must keep financial responsibility records **on site**.

- Current *Certification of Financial Responsibility*
- Other documentation demonstrating FP include:  
State financial assurance funds; Insurance coverage, Guarantee, Surety Bond, Letter of Credit, Trust fund, and Passing Financial Test
- \* Some tribes are self insured.



# Tanks not covered by FR

- Farm and residential tanks 1,100 gal or less and hold motor fuel for non-commercial purposes
- Heating oil tanks
- Aboveground Storage Tanks (ASTs)
- Septic Tanks and systems for collecting stormwater and wastewater
- Flow-through process tanks
- 110 gal or less tanks
- Emergency spills and overfill tanks



# Key Points



- Complying with FR requirements protects UST owners/operators
- Through FP, owners/operators are able to pay for high clean up costs or lawsuits by third parties for USTs or LUSTs



# REPORTING AND RECORDKEEPING

# Reporting and Recordkeeping

- Owner/operator responsibilities are reporting, recordkeeping, and maintaining inspection records.
- Notification forms for all UST systems must be submitted to the implementing agency.

EPA Environmental Protection Agency Washington, DC 20460		United States Form Approved OMB No. 2050-0068
<b>Notification for Underground Storage Tanks</b>		
State Agency Name and Address:		<b>STATE USE ONLY</b>
		ID NUMBER:
		DATE RECEIVED:
		DATE ENTERED INTO COMPUTER:
		DATA ENTRY CLERK INITIALS:
		OWNER WAS CONTACTED TO CLARIFY RESPONSES, COMMENTS:
<b>TYPE OF NOTIFICATION</b> <input type="checkbox"/> A. NEW FACILITY <input type="checkbox"/> B. AMENDED <input type="checkbox"/> C. CLOSURE Number of tanks at facility: _____ Number of continuation sheets attached: _____		
<b>INSTRUCTIONS AND GENERAL INFORMATION</b>		
<p>Please type or print in ink. Also, be sure you have signatures in ink for sections VIII and XII. Complete a notification form for each location containing underground storage tanks. If more than 5 tanks are owned at this location, you may photocopy pages 3 through 5 and use them for additional tanks.</p> <p>The primary purpose of this notification program is to locate and evaluate underground storage tank systems (USTs) that store or have stored petroleum or hazardous substances. The information you provide will be based on reasonably available records, or in the absence of such records, your knowledge or recollection.</p> <p>Federal law requires UST owners to use this notification form for all USTs storing regulated substances that are brought into use after May 8, 1986, or USTs in the ground as of May 8, 1986 that have stored regulated substances at any time since January 1, 1974. The information requested is required by Section 5002 of the Resource Conservation and Recovery Act (RCRA), as amended.</p> <p><b>Who Must Notify?</b> Section 5002 of RCRA, as amended, requires owners of USTs that store regulated substances (unless exempted) to notify designated State or local agencies of the existence of their USTs. "Owner" is defined as:</p> <ul style="list-style-type: none"> <li>In the case of an UST in use on November 8, 1984, or brought into use after that date, any person who owns an UST used for storage, use, or dispensing of regulated substances; or</li> <li>In the case of an UST in use before November 8, 1984, but no longer in use on that date, any person who owned the UST immediately before its discontinuation.</li> </ul> <p>Also, if the State so requires, any facility that has made any changes to facility information or UST system status, must submit a notification form (only amended information needs to be included).</p> <p><b>What USTs Are Included?</b> An UST system is defined as any one or combination of tanks that (1) is used to contain an accumulation of regulated substances, and (2) whose volume (including connected underground piping) is 10% or more beneath the ground. Regulated USTs store petroleum or hazardous substances (see the following "What Substances Are Covered").</p> <p><b>What Tanks Are Excluded From Notification?</b></p> <ul style="list-style-type: none"> <li>Tanks removed from the ground before May 8, 1986;</li> <li>Farms or residential tanks of 1,100 gallons or less capacity storing motor fuel for noncommercial purposes;</li> <li>Tanks storing heating oil for use on the premises where stored;</li> <li>Septic tanks;</li> <li>Pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 1979, or which is an intrastate pipeline facility regulated under State laws;</li> <li>Surface impoundments, pits, ponds, or lagoons;</li> <li>Storm water or waste water collection systems;</li> <li>Flow-through process tanks;</li> <li>Liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;</li> <li>Tanks on or above the floor of underground areas, such as basements or tunnels;</li> <li>Tanks with a capacity of 110 gallons or less.</li> </ul> <p><b>What Substances Are Covered?</b> The notification requirements apply to USTs containing petroleum or certain hazardous substances. Petroleum includes gasoline, used oil, diesel fuel, crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute). Hazardous substances are those found in Section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA.</p> <p><b>Where To Notify?</b> Send completed forms to:</p> <p><b>When To Notify?</b> 1. Owners of USTs in use or that have been taken out of operation after January 1, 1974, but still in the ground, must notify by May 8, 1986. 2. Owners who bring USTs into use after May 8, 1986, must notify within 30 days of bringing the UST into use. 3. If the State requires notification of any amendments to facility, send information to State agency immediately.</p> <p><b>Penalties:</b> Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed \$11,000 for each tank for which notification is not given or for which false information is given.</p>		
<b>I. OWNERSHIP OF UST(s)</b>		<b>II. LOCATION OF UST(s)</b>
Owner Name (Corporation, Individual, Public Agency, or Other Entity)		If required by State, give the geographic location of USTs by degrees, minutes, and seconds. Example: Latitude 42° 30' 12" N, Longitude 86° 24' 17" W
Street Address		Latitude _____ Longitude _____
County		Facility Name or Company Site Identifier, as applicable
City	State	Zip Code
Phone Number (include Area Code)		<b>Q</b> If address is the same as in Section I, check the box and proceed to section III. If address is different, enter address below: Street Address _____ City _____ State _____ Zip Code _____



# Reporting

- Reports of all releases, including spills, overfills, suspected and confirmed releases.
- Corrective action plans.
- Notification of change in service or permanent closure, submitted **30 days** before closure.



# Recordkeeping

The following must be maintained on site or readily available:

- Inspection record
- Corrosion protection test results
- Recent compliance with release detection requirements
- Documentation of any UST system repairs
- Financial responsibility documentation
- Permanent closure record



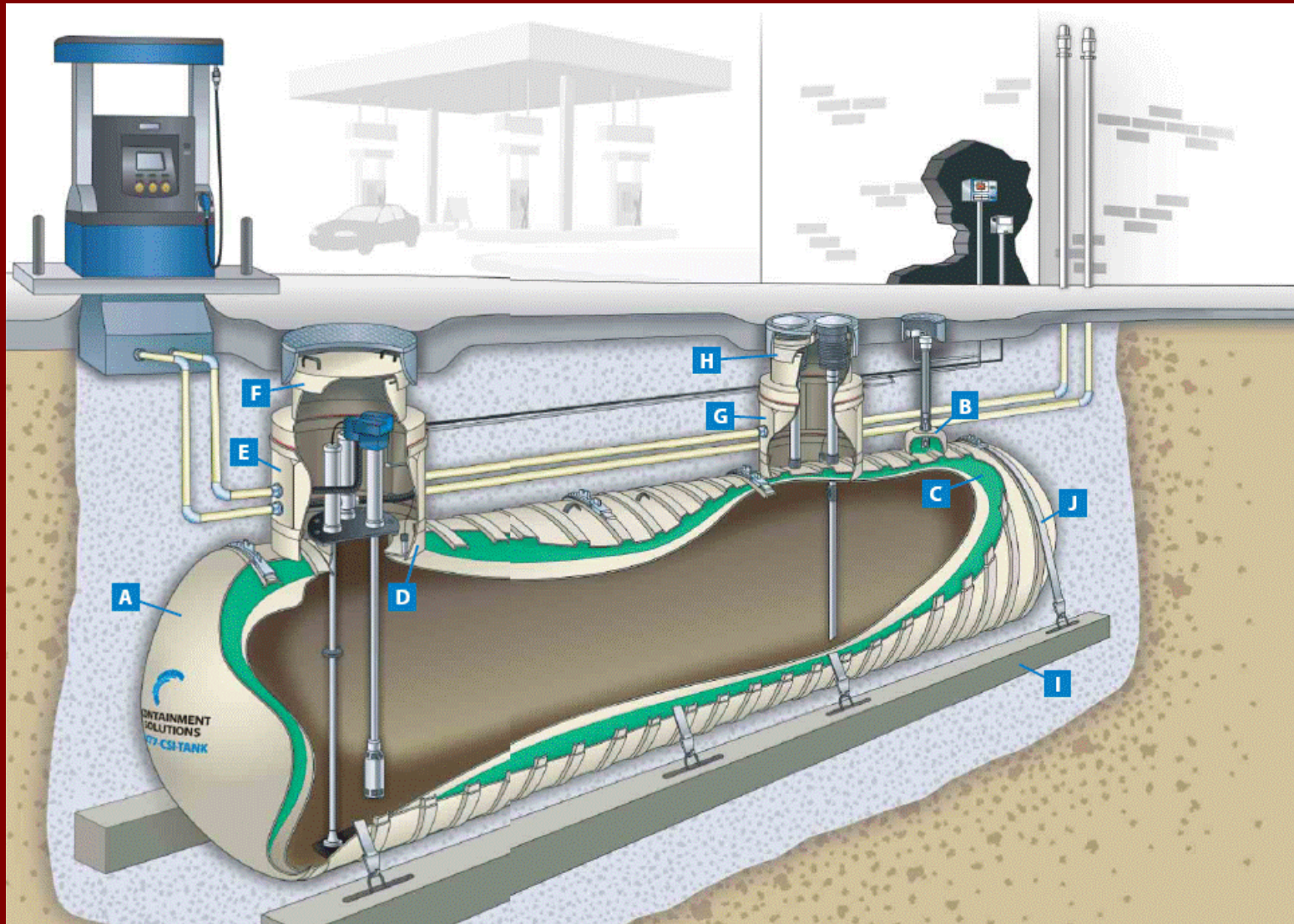
# Questions?

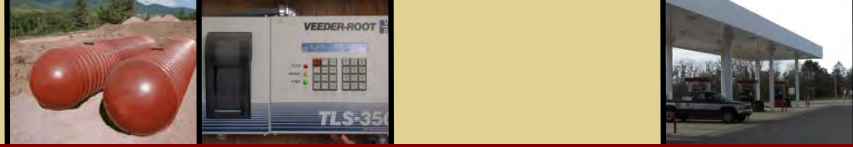




# UST SYSTEMS

# UST Systems





# UST Owners/Operators

**Owner:** Person who owns a UST system used for storage, use, or dispensing of regulated substances.

**Operator:** Person in control of, or having responsibility for, the daily operation of the UST system.

- Tribes – Tribal governments, casinos, hospitals, and schools (BIA)
- Tribal Members – Individual owners
- Non-Tribal Owners – Businesses, fee-land areas, and leased lands



# Definition: UST

A tank system and its piping that has at least 10% of its volume underground.



+



= 10%



# USTs

## Steel



Single or double wall tanks  
Multiple compartments  
Size: 1,000 gal-40,000 gal

## Fiberglass Reinforced Plastic (FRP)





# LUSTs

Any type of tank has the potential to leak fuel.



Remediation is expensive and a lengthy process.



# Aboveground Storage Tanks

- Spill Prevention Countermeasures and Control (SPCC) regulations
  - Overfill alarms and automatic shut-off devices.



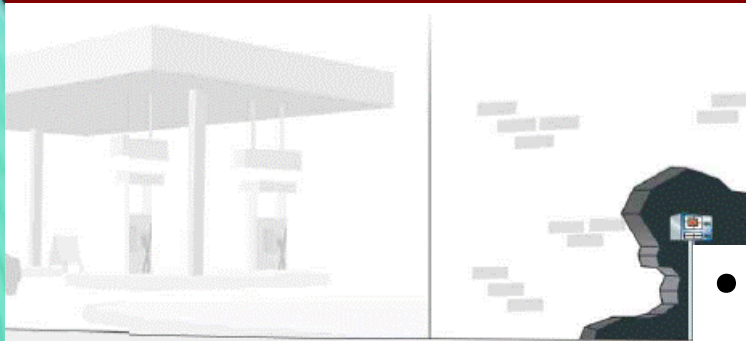


# Piping

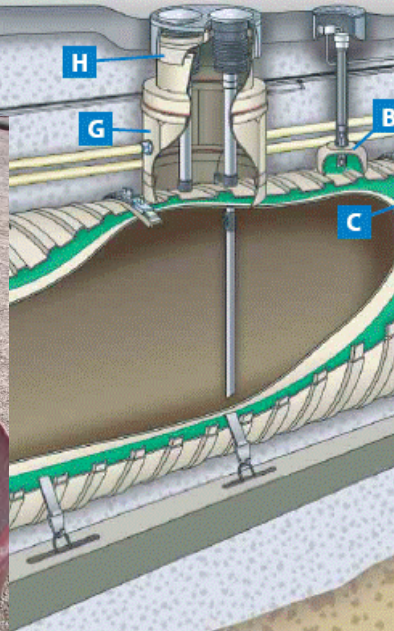
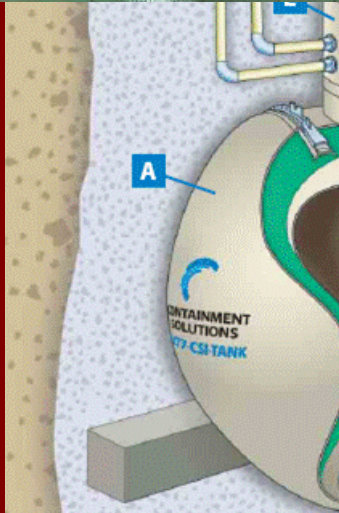


- Product line from tank to dispenser
- Steel or fiberglass piping
  - Single or doubled wall
  - Flexible

# Turbine Pump

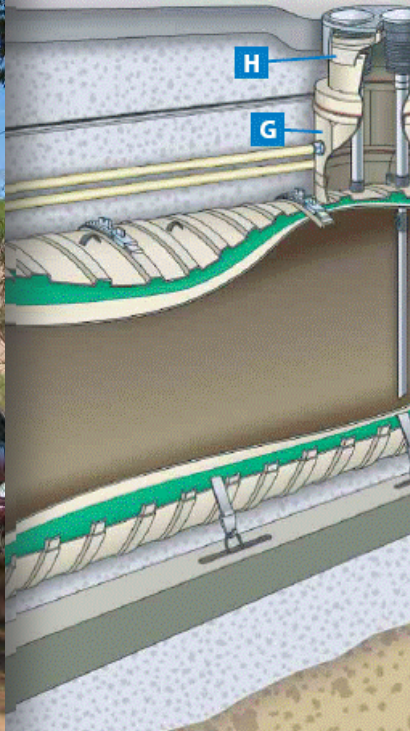
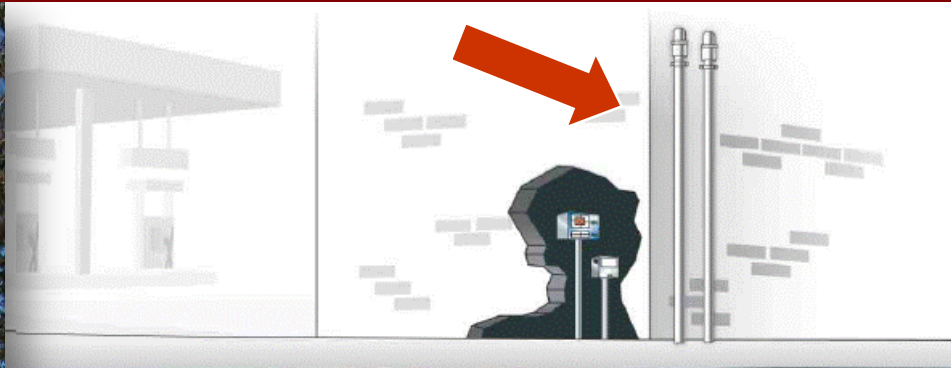


- Pump and control the product flow
- Fluid management system that includes mechanical and electronic leak detection





# Vent Line

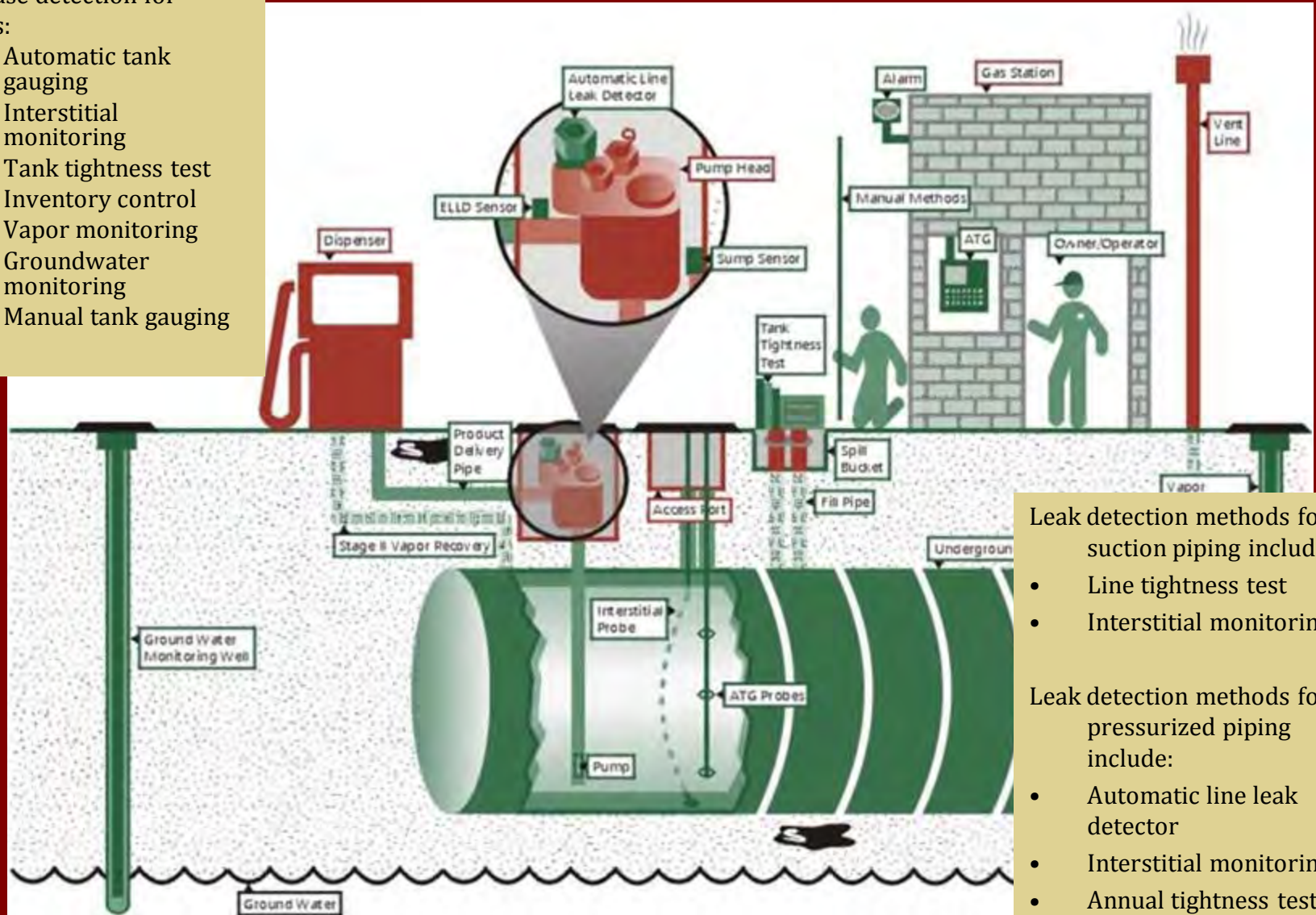


- Vent pipe allows air to escape the tank when it is being filled with product.
- Pipe should have a cap to prevent rainwater from entering the tank.

# Leak Detection Methods

Release detection for tanks:

- Automatic tank gauging
- Interstitial monitoring
- Tank tightness test
- Inventory control
- Vapor monitoring
- Groundwater monitoring
- Manual tank gauging



Leak detection methods for suction piping include:

- Line tightness test
- Interstitial monitoring

Leak detection methods for pressurized piping include:

- Automatic line leak detector
- Interstitial monitoring
- Annual tightness test

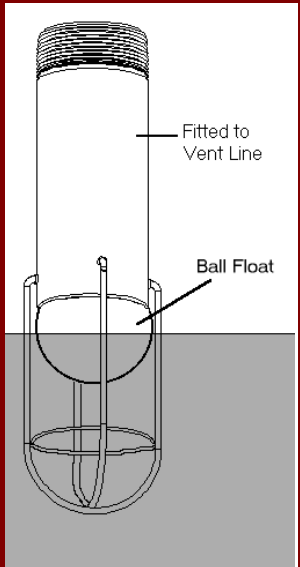
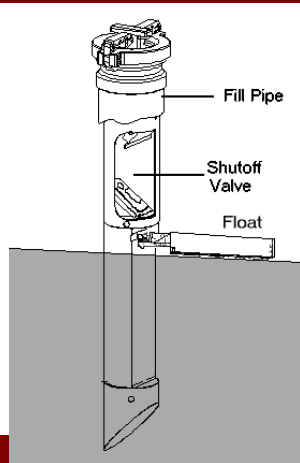
# Automatic Tank Gauging

Companies:

- Veeder Root
- Gilbarco
- Red Jacket



# Overfill Protection



Equipment to reduce or stop product flow and prevent overfill of product by alerting the delivery person before the tank becomes full.

Three types:

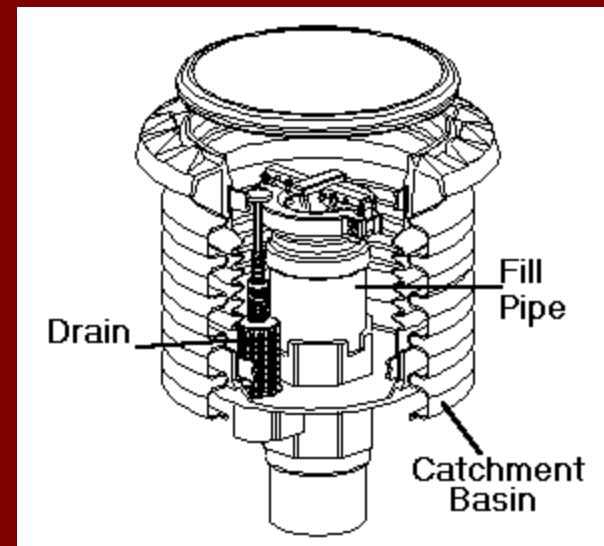
- Flapper valve
- Shut-off Switch or Audible Alarms
- Ball float valve

# Spill Protection

- Designed to temporarily contain product spills
- Not designed to contain fuel for long periods of time
- Usually less than 5 gallons in size

Keep all spill buckets clean  
and free of dirt and  
water

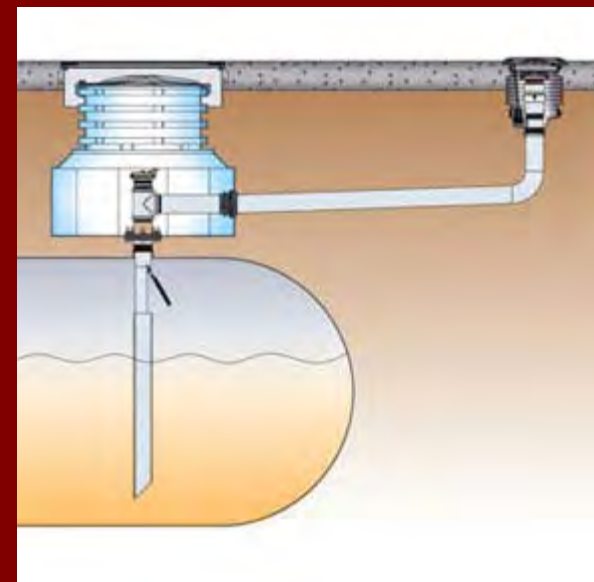
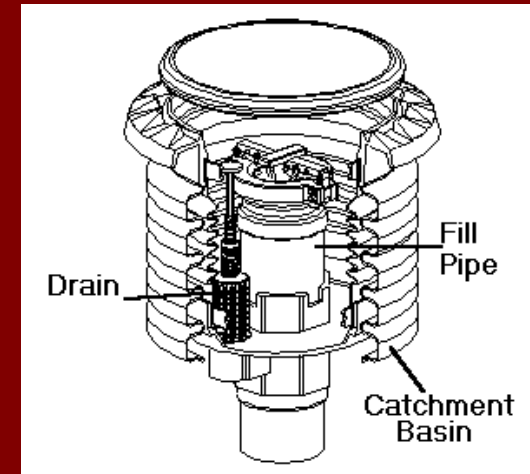
Keep fill caps locked





# Fill Pipes

- Fill riser, fill adapter, and drop tube
  - Fill riser: one per tank or compartment
  - Located in spill bucket
  - Adapter can be worn and cause a spill
- Remote fill pipe
  - Not directly on top of tank and due to structure barriers



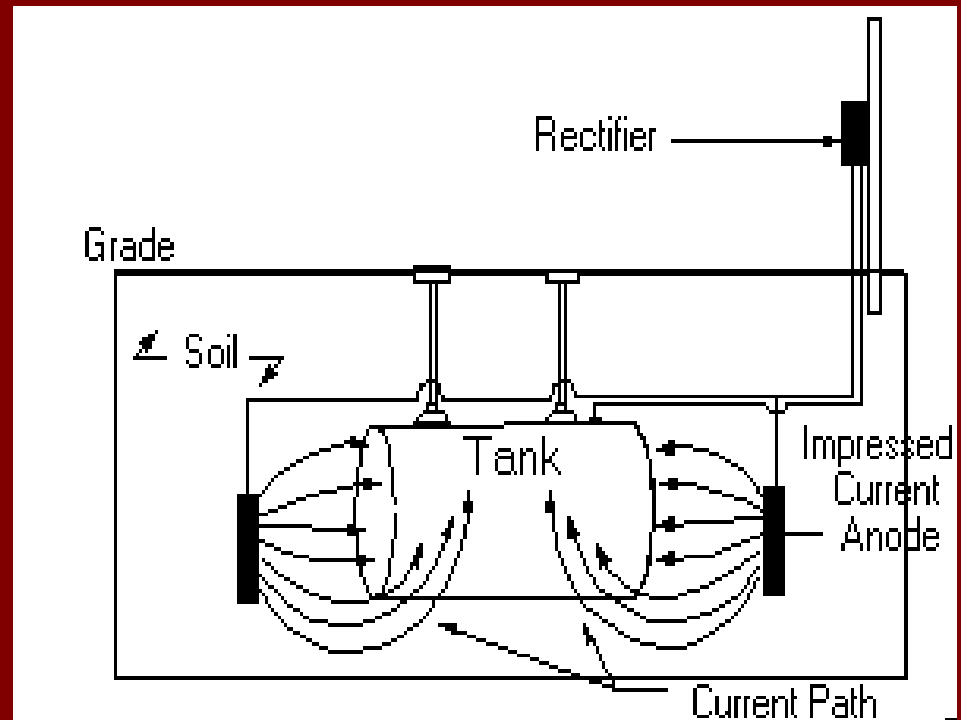
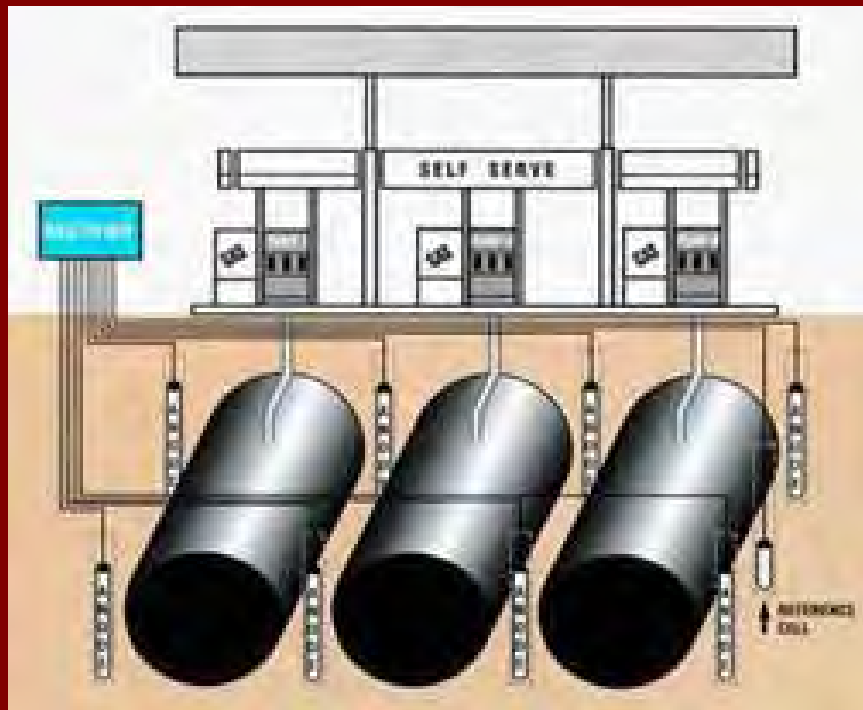


# Corrosion Protection

Federal regulations require cathodic protection on steel tanks and piping.

System: anodes, cathodes, and rectifier

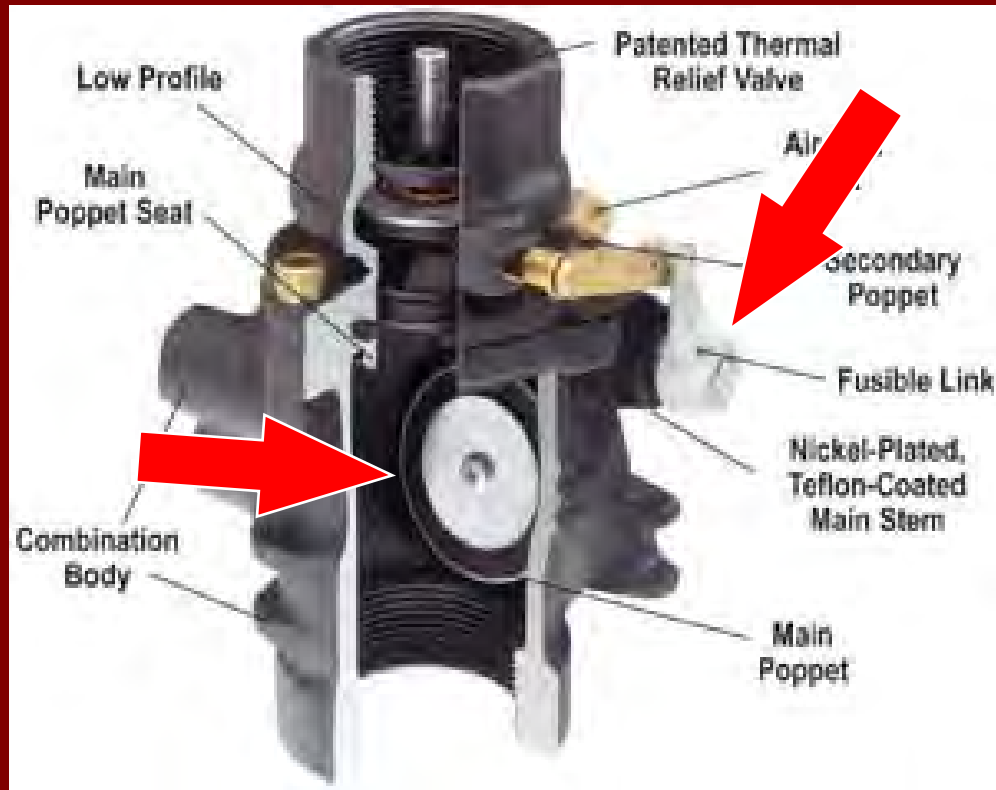
- Impressed current of  $\sim 850$  mv
- Test every 6 months and recordkeeping





# Shear Valve

- Regulated
- Closes fuel line under the dispenser





# Questions?





# UST AWARENESS

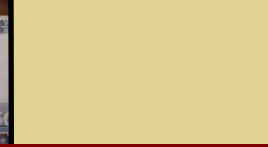


# Problems with USTs

- Before the mid-1980's, most USTs were made of bare steel and single walled.
- Steel would corrode over time and release UST contents into the environment.
- **PROBLEM:** USTs contain petroleum or other hazardous substances that enter the environment and contaminate groundwater.



All USTs have the potential to leak.  
Today, most leaks occur in the piping



# Environmental Hazards

- PROBLEM: UST leaks contaminate the soil and groundwater
- Remediation is expensive and takes time
- Groundwater cannot be cleaned up 100%



# Health Hazards

## Gasoline Additives

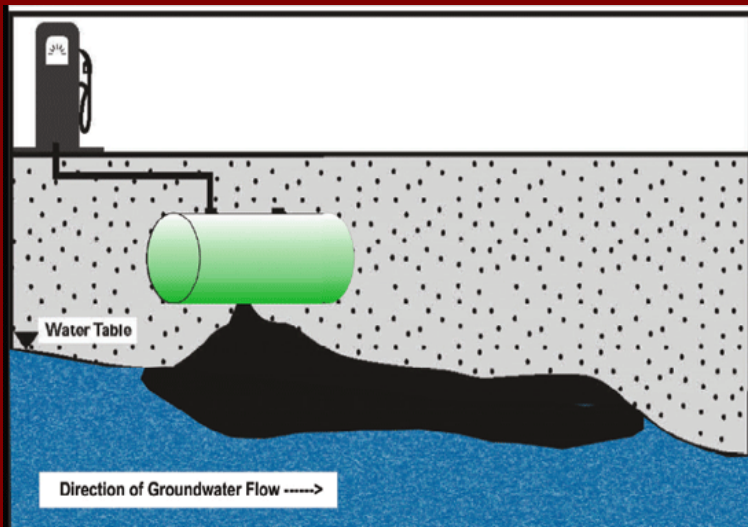
- Benzene
- Toluene
- Ethyl Benzene
- Xylene
- Hexane
- Octane
- Ethylene Dibromide
- Ethylene Dichloride
- Tetraethyl Lead Residue

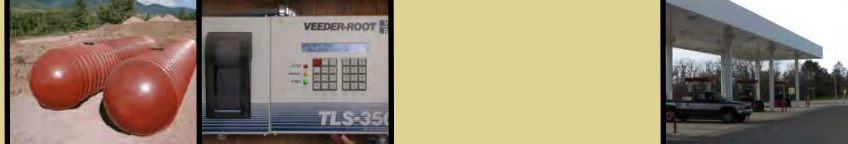


# Health Effects



- Kidney Disease
- Liver Disease
- Lung Tissue
- Respiratory Tract
- Lead (Blood) Poisoning
- Birth Defects
- Leukemia
- Central Nervous System





# UST Compliance and Implementing Agencies

- EPA Office of Underground Storage Tanks (OUST)
- States – DEQ UST Departments
- Tribes – UST Tribal Inspectors



*Inspectors*



# Emergency Response

- Implement planning and preparedness requirements, and respond to environmental emergencies.
- Emergency Response Plan
- Contact EPA and tribal UST departments
- Notify gas station owner/operator
- National Response Center: Report online or call 1-800-424-8802 or <http://www.nrc.uscg.mil/nrchp.html>



# Awareness Benefits

- Protect health and safety of the community
- Prevent contamination of tribal drinking water supplies and water resources
- Preserve tribal lands





# Questions?





# Contact Information

- Inter Tribal Council of Arizona, Inc.

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Phoenix, AZ 85004

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