



UST Operator Training



B Operator Refresher Course



UST Program Overview

- Utah Department of Environmental Quality, DERR UST Program
 - Billing and record keeping
 - Annual inspections
- Some County Health Departments oversee USTs

UST Operator Requirements

- Three classes of operators: A, B, and C
- A and B Operators must attend approved training course and pass DERR examination
- C Operator is trained by the B, records of this training must be kept on site

Class A Operator

- Owner or Primary Employee
 - Have general knowledge of UST systems
 - Ensure records are properly kept
 - Ensure proper response to emergencies
 - Ensure financial responsibility
 - Ensure B and C operators are trained and registered

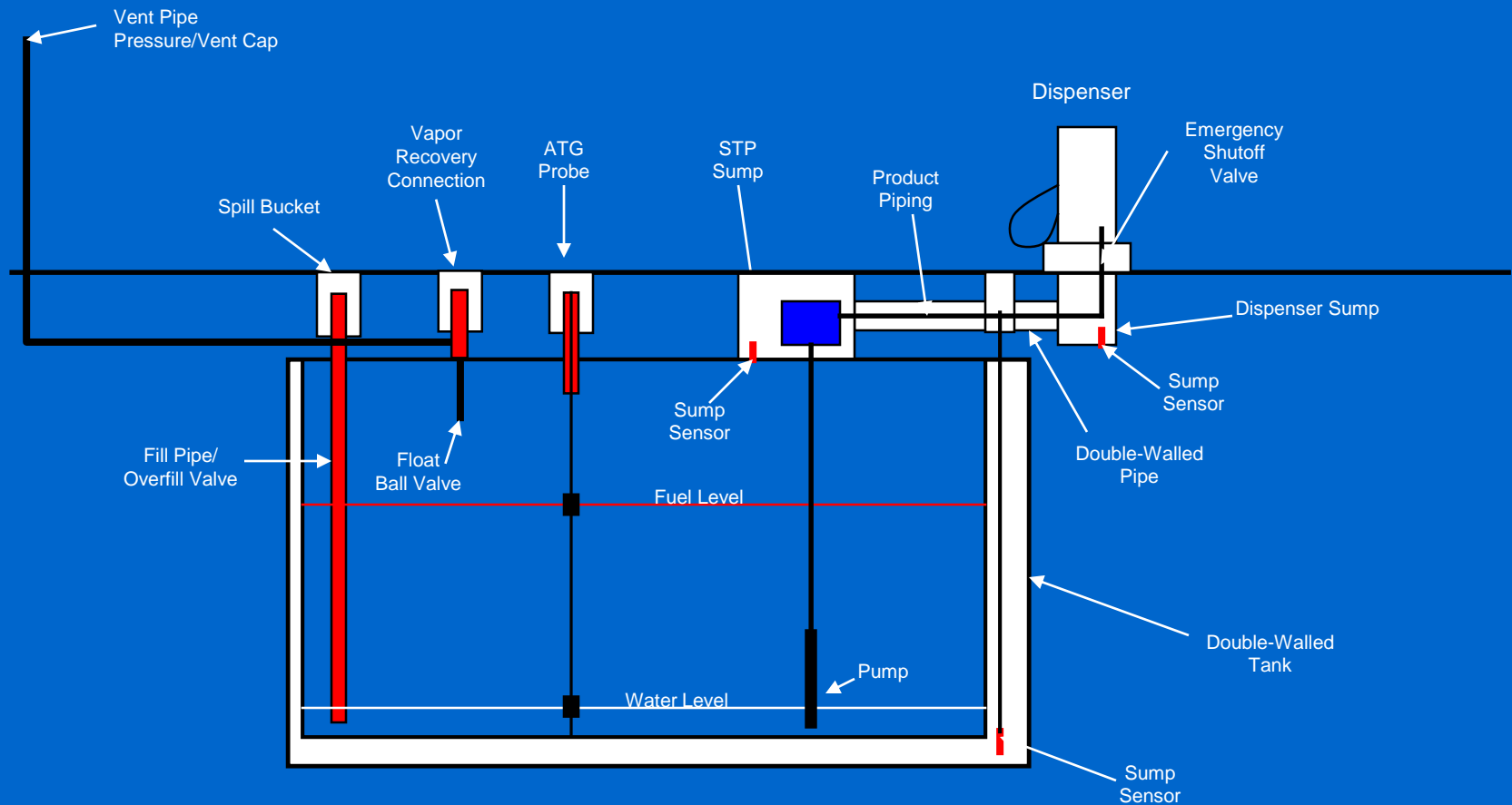
Class B Operator

- O/O, employee, or contractor
 - Ensure physical inspections every 30 days
 - Ensure that status of system is monitored every 7 days
 - Ensure that Monthly Inspection Checklist is completed
 - Ensure spill and overfill systems are in operation
 - Be on site or designate a qualified person to be onsite for annual inspections
 - Report releases
 - Ensure Class C has training

Class C Operator

- Be present during normal business hours
- Monitor product transfers for spills
- Properly respond to alarms
- Notify Class A and B of emergency
- Take immediate action when required
- A and B may act as C

Typical UST System



Tanks

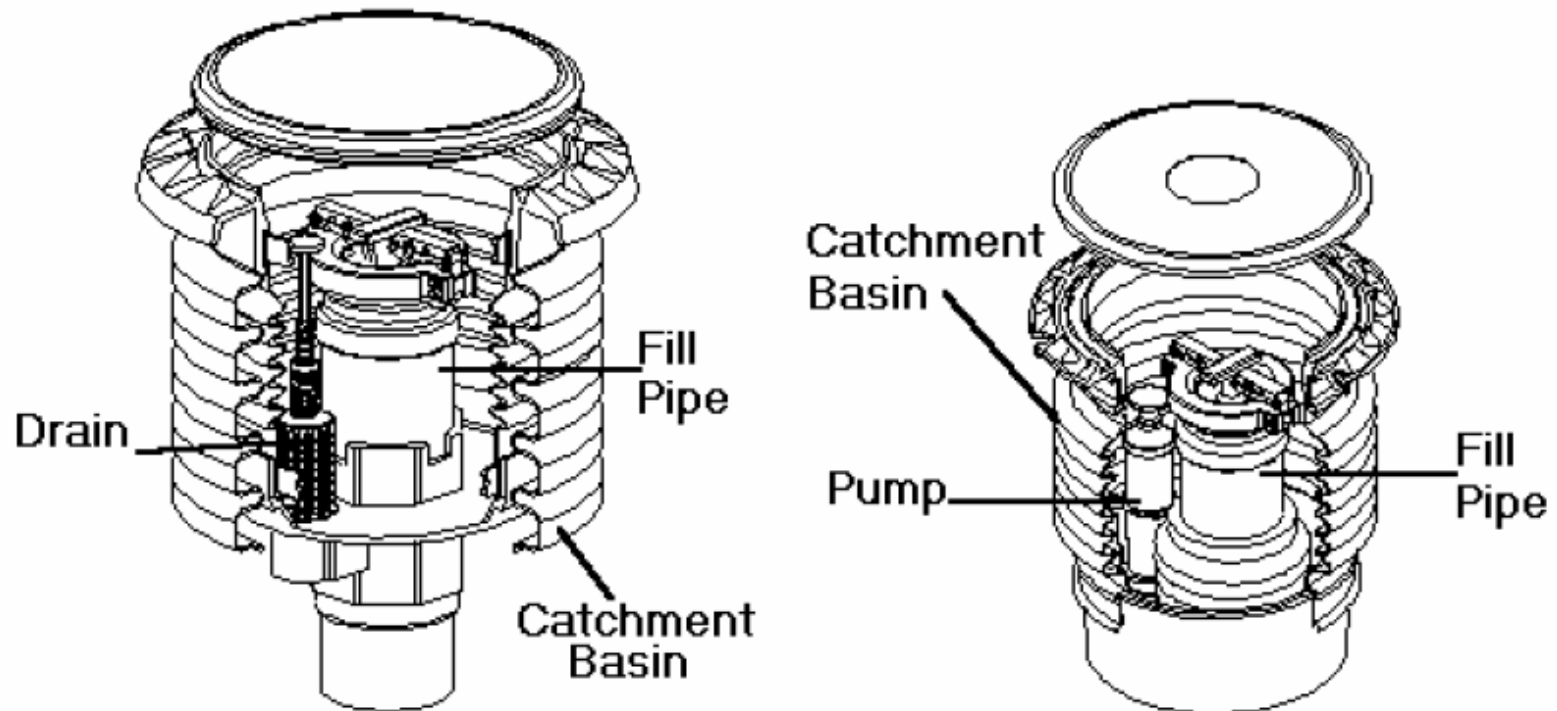


Spill Buckets

- Required at all fill pipes
- May be installed at vapor recovery connection points
- Intended to prevent spills during delivery
- May have a drain to allow spilled product and water to be drained into tank
- Should not have fuel or water in them

Spill Buckets

Spill Buckets

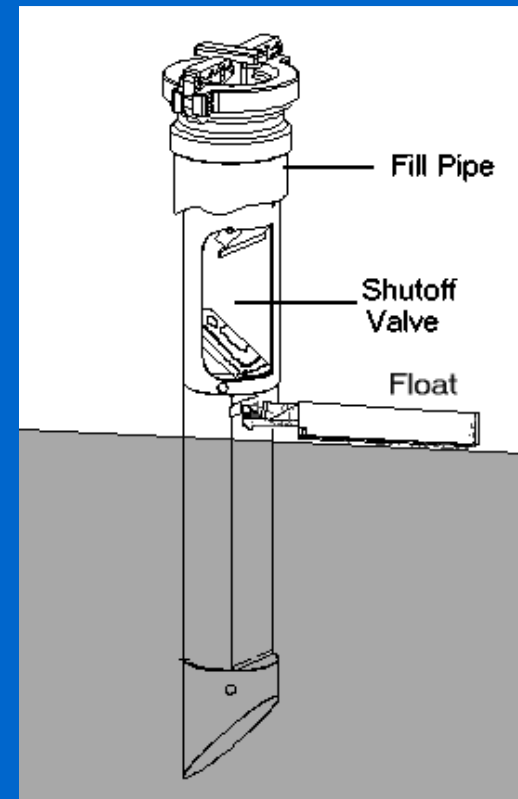


Fill Pipe/Overfill Valve

Spill Bucket



Overfill Valve



Overfill Prevention

- Stop product flow, reduce product flow, or alert delivery person before tank is full
- Alerts driver when tank is no more than 90% full
- Shut off flow when tank is no more than 95% full

Overfill Prevention

- Overfill valve – check for obstructions – use caution when gauging tank to avoid damaging valve
- Float ball valves – located in tank
- Overfill alarms – outside where driver will hear it

Pumps

- Submersible Turbine Pump
- Pump head visible in largest manhole
 - Check valve
 - Line leak detector
 - Electrical connections



Automatic Line Leak Detectors

- Two types of line leak detectors:
- Mechanical LLD
 - Restricts product flow – Slow Flow
 - Requires 3 GPH simulated leak test annually
- Electrical LLD
 - Shuts off product flow and may trip an alarm
 - Requires 3 GPH simulated leak test annually or monthly functionality self-test (3 GPH)

Piping

- Must be double-walled and drain to a sump
- Connected to the sumps by entry boots (check for cracks)
- Must be tested annually at 0.1 GPH or monthly at 0.2 GPH with electric line leak detector
- Annual tests must be conducted by a certified tester



Stage 1 Vapor Recovery

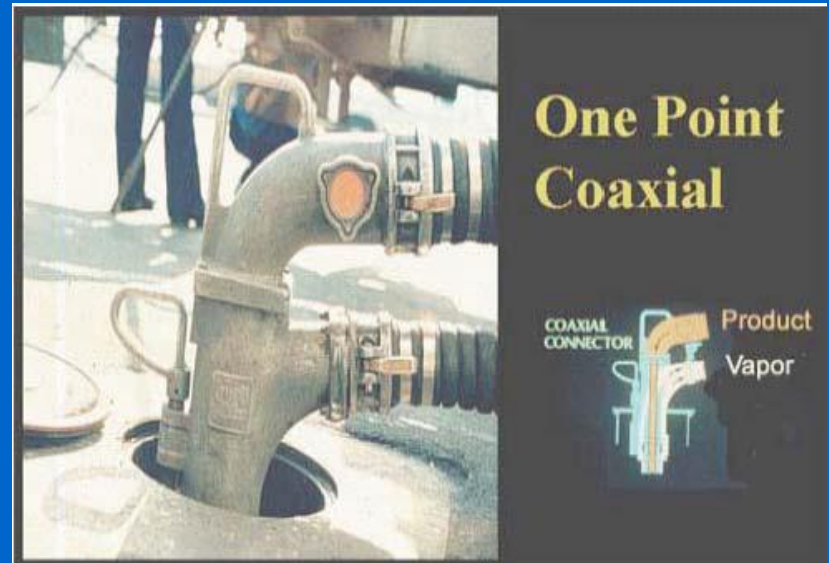
- Control of vapors during delivery and storage
- During delivery, vapors go back to tanker
- Pressure vent cap on gasoline vent pipes
- Not required for diesel

Two Types of Vapor Recovery

Two Point



Single Point



Dry Break

- Used on Two Point
- Connection point may be in a spill bucket
- Cap over the dry break
- Check the poppet for obstructions and operation



Automatic Tank Gauging (ATG)

- Probes in tanks with a wire connecting to control panel
- Minimum product required
- Tests for leaks monthly, keep a copy of test report – from control panel
- Justify or report failures within 24 hours



ATG Control Panel



Interstitial Monitoring (IM)

- Secondary containment
- Must be monitored monthly either with probes in sumps and interstitial spaces or visually - probes should be in the lowest part of sump
- Reports printed at control panel – status normal - keep reports for inspection
- Justify or report failures within 24 hours

Sumps

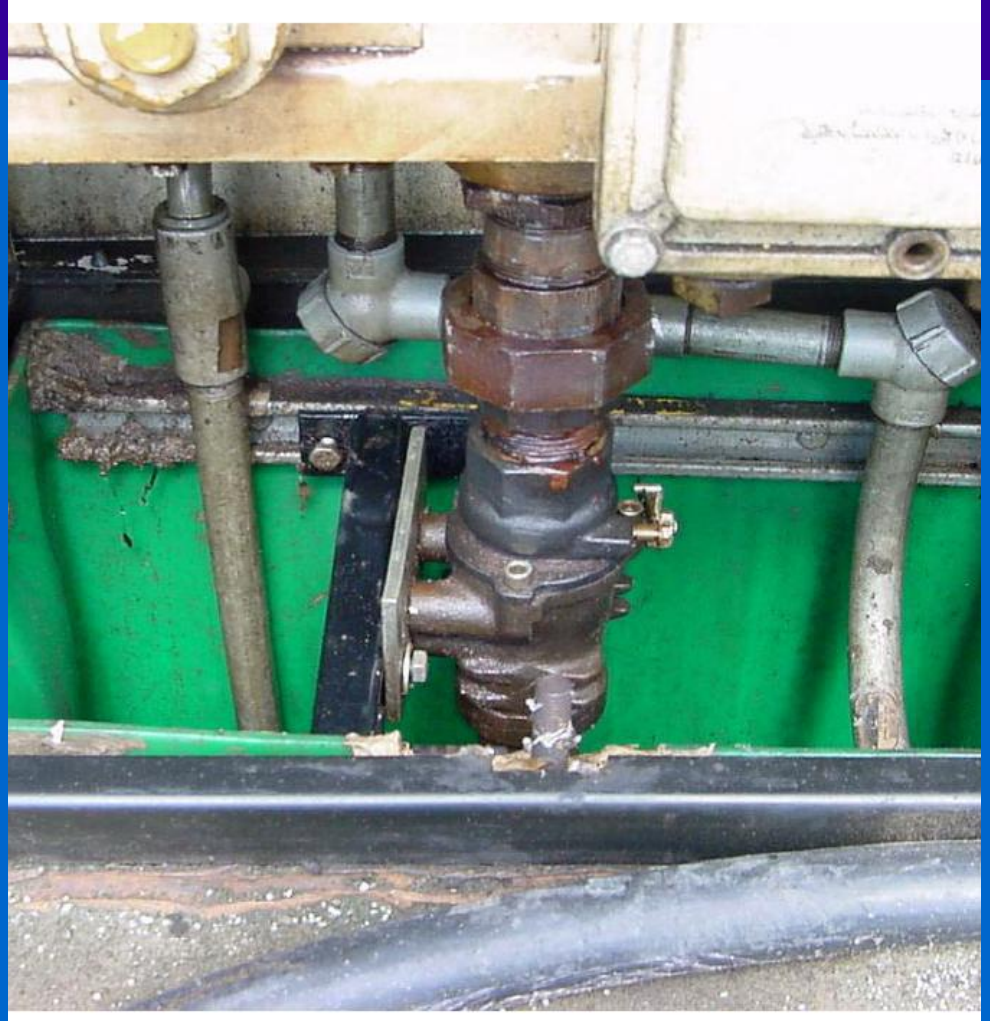
- Probes must be in lowest portion
- Check for cracks in entry boots
- Check for fuel or water
- Make sure gravel drain is clear

Sumps



Dispenser Sumps

- Probes must be in lowest portion
- Safety valves below dispenser



Daily Inspections

- May be conducted by Class C operator
- Check for any problems
 - Leaks or fuel on driveways
 - Complaints of automatic nozzles not shutting off
 - Slow flow from dispensers
 - Unusual conditions

Weekly Inspections

- Class B operator is responsible for monitoring and should be in contact with facility in least once a week
- May be conducted by Class C operator under direction of Class B operator
- Ensure status of UST system, including alarms and unusual operating conditions, is monitored every 7 days

Monthly Inspections

- FIRST LINE OF DEFENSE
- Each site must be inspected every 30 days
- Inspected by or under the direction of Class B operator
- Complete UST Operator Inspection-Utah Form



Monthly Inspections

- Tank leak detection – valid leak tests preformed for each tank
 - ATG: passing test report printed and filed
 - IM: sensor status report printed and filed
 - SIR: inventory readings current and last months passing results filed

Monthly Inspections

- Piping leak detection
 - ALD: passing test within last 12 months
 - LTT: passing test within last 12 months, or
 - 0.2 GPH, IM, SIR: inventory readings current and last months passing results filed

Monthly Inspections

- Physical inspection
 - All tank top covers are present, in good condition, and properly seated
 - All tank entry ports are properly capped and sealed
- Spill Buckets
 - All are free from water, product, and debris
 - Check for holes, cracks, or deformation

Monthly Inspections

- Overfill
 - All fills are un-obstructed (gauge sticks)
 - Auto-shutoff valves or ball floats are present and functional
 - Overfill alarms are properly located and identified
 - Alarm is close enough
 - Alarm is load enough

Monthly Inspections

- Vapor recovery ports
 - Poppets move freely and seals tightly
 - Ports are un-obstructed (no rocks or sticks)
- Sumps are free of water and debris
- Penetration fittings are intact
- No visible signs of leaking

Annual Inspections

- Conducted by DERR or Local Health Department Inspector
- Class B operator or his qualified designee must be on site

Spills

- Spills over 25 gallons must be reported to the DERR within 24 hours
- Spills less than 25 gallons must be cleaned up within 24 hours

Spill Response

- Stop the release
 - Emergency shut off
 - Bag leaking hose
 - Empty the tank
- Contain the release
 - Booms, mats, or absorbents
 - Non-sparking tools
- Call emergency authority

What's Wrong with this Picture?



Sump is full of product

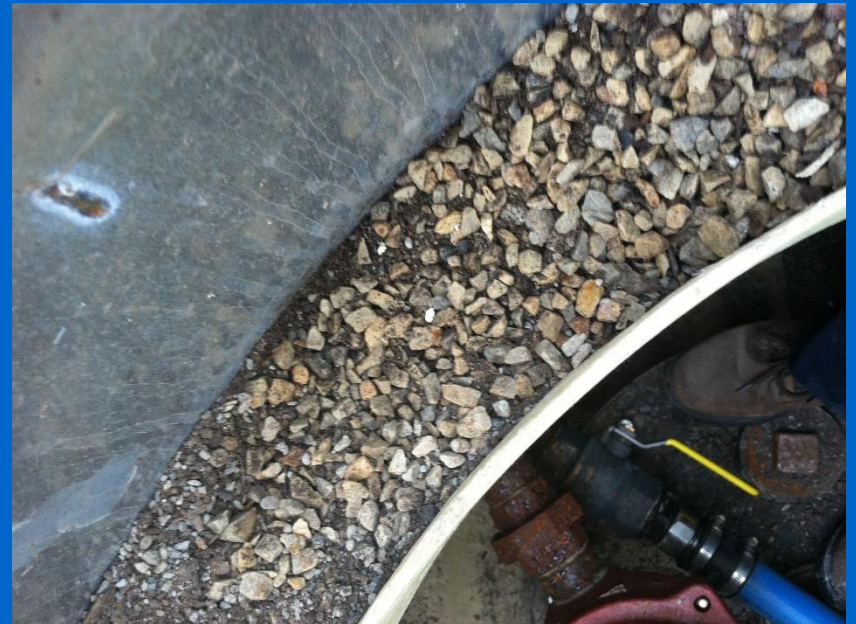


Entry boot is cracked

What's Wrong with this Picture?



Gauge stick in fill pipe



Gravel drain is filled with dirt

What's Wrong with this Picture?



Spill bucket is full of product

Spill bucket is cracked