

# UST Requirements

- ◆ Registration
- ◆ Insurance
- ◆ Release Response Plan
- ◆ Spill/Overfill Protection
- ◆ Monthly Inspections/Inspection Forms
- ◆ Release Detection Monitoring
- ◆ Corrosion Protection
- ◆ Contacts

# Why Care about USTs?

- ◆ Can threaten Groundwater and thus drinking water systems.
- ◆ Can be a threat to human health.
- ◆ New and Upgraded systems can still fail.
- ◆ New releases persist today.

# Why Care about USTs?

- ◆ Piping and dispensers the most common sources of leaking UST systems.
- ◆ Physical and mechanical damage most common overall problem.
- ◆ Both old and young piping systems experience problems.
- ◆ Release detection detects only a small percentage of actual releases.
- ◆ 40% of releases affect groundwater.

# NJDEP Mission

- ◆ Protect human health and environment
- ◆ Ensure sound UST system management
- ◆ Protect groundwater resources
- ◆ Prevent, control, remediate, and abate leaking UST systems

# Regulated USTs

- ◆ All tanks 10% or more buried containing hazardous substances.
- ◆ Hazardous Substance means Motor Fuel, waste oil, others.
- ◆ Except:
  - Residential Heating Oil tanks of any size,
  - Non-residential heating oil tanks 2,000 gallons or less,
  - Farm/residential tanks 1,100 gallons or less
  - Others

# Registration

- ◆ A person who owns or operates a tank
  - Must register it with NJDEP
  - May only use the tank with a valid Registration Certificate
- ◆ Registration is not transferable.
- ◆ Information is available to the public.

# Registration Certificate

- ◆ Must be displayed on-site or readily available upon inspection.
- ◆ Can be denied: if
  - Incomplete, inaccurate, or illegible
  - No fees paid
  - O/O fails to comply with any requirement
- ◆ Can be revoked if
  - False, inaccurate information
  - Fails to submit questionnaire
  - Fails to pay fees
  - NJDEP access for inspection is denied
  - Fails to comply with any requirement



STATE OF NEW JERSEY  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 DIVISION OF REMEDIATION SUPPORT  
 UNDERGROUND STORAGE TANK PROGRAM  
 P.O. BOX 028  
 TRENTON, NEW JERSEY 08625-0028  
 Phone: (609) 633-1464



**UNDERGROUND STORAGE TANK SYSTEMS  
 REGISTRATION CERTIFICATE**

<p>The Department of Environmental Protection hereby grants this registration to operate and maintain the Underground Storage Tank System(s) described below in accordance with the laws and regulations of the State of New Jersey. This registration is revocable with due cause and is subject to the limitations, terms and conditions pursuant to N.J.A.C. 7:14B.</p>		<p><b>Approval Date:</b> 12/01/2004</p>									
		<p><b>Expiration Date:</b> 06/30/2007</p>									
<p><b>Facility ID:</b> 123456</p> <p><b>Registration Activity ID:</b> UST030001</p>	<p><b>Facility Contact (Operator):</b> Mr. Marina SMITH (609)584-4200</p>	<p><b>Total Number of Tanks:</b> 2</p> <p><b>Total Capacity (Gallons):</b> 6500</p>									
<p><b>Facility Address:</b> DEL BOCA VISTA MARINA INC. 123 GOOD VIEW LANE TRENTON, NJ 08562</p>		<p><b>Owner:</b> MR. JOE CLAMBAKE DEL BOCA VISTA MARINA INC. 888 HARDSHELL LANE RED BANK, NJ 08888</p>									
<p><b>Approved Tanks and Products Stored:</b></p> <table border="1"> <thead> <tr> <th>TANK No.</th> <th>TANK CAPACITY</th> <th>TANK CONTENTS</th> </tr> </thead> <tbody> <tr> <td>E1</td> <td>4000</td> <td>Unleaded Gasoline</td> </tr> <tr> <td>E2</td> <td>2500</td> <td>Unleaded Gasoline</td> </tr> </tbody> </table>			TANK No.	TANK CAPACITY	TANK CONTENTS	E1	4000	Unleaded Gasoline	E2	2500	Unleaded Gasoline
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E1	4000	Unleaded Gasoline									
E2	2500	Unleaded Gasoline									
<p><b>This Registration Must Be Available for Inspection at the Facility AT ALL TIMES</b></p>											



# Fees

- ◆ \$100 fee for each UST facility upon initial registration.
- ◆ Three year registration cycle.
- ◆ \$300 fee for new tank installation or substantial modification.
- ◆ \$300 fee for review of closure plan.
- ◆ \$500 fee for Site Investigation plan review.
- ◆ \$1,000 fee for initial cleanup plan review.

# Registration and Billing Form



# Mandatory Financial Responsibility

- ◆ Insurance

- ◆ **7:14B-15.2 Amount and scope of required financial responsibility**
- ◆ (a) Owners and operators shall maintain financial responsibility assurance for regulated underground storage tank systems in the **per-occurrence** amounts as follows:
  - ◆ 1. For petroleum underground storage tank systems located at petroleum marketing facilities, or facilities that handle an average of more than 10,000 gallons of petroleum per month based on annual throughput for the previous calendar year:
    - ◆ \$1,000,000;
  - ◆ 2. For all other petroleum underground storage tanks: \$250,000; and
  - ◆ 3. For underground storage tanks systems containing hazardous substances other than petroleum: \$1,000,000.
- ◆ (b) Owners or operators shall maintain financial responsibility assurance for regulated underground storage tank systems in the **annual aggregate** amounts as follows:
  - ◆ 1. For 1 to 100 underground storage tanks: \$1,000,000; and

# Release Response Plan



## Release Response Plan

	Phone #	Contact Name
<b>NJDEP Hot Line:</b>	877/927-6337	
<b>Fire Department:</b>	_____	_____
<b>Local Health Department:</b>	_____	_____
<b>County Health Department:</b>	_____	_____
<b>Facility Owner/Operator:</b>	_____	_____
<b>Corrective Action Contractor:</b>	_____	_____
<b>Repair Contractor:</b>	_____	_____
<b>Other Contacts:</b>		
_____	_____	_____
_____	_____	_____

### Procedures

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____



# Spill and Overfill Prevention














Preventing releases during deliveries



Make sure  
the colors  
match the  
actual  
product  
type.

Used  
Oil



LEADED GASOLINES	 Super premium	DISTILLATES	 Diesel
	 Regular		 No. 1 fuel oil
	 Sub-regular		 No. 2 fuel oil
UNLEADED GASOLINES	 Premium		 Kerosine
	 Super		
	 Regular		
VAPOR	 Vapor hose connection		
GASOLINE WITH EXTENDER	 Super unleaded gasohol	DISTILLATE WITH EXTENDER	 Diesohol



# Overfill Alarms



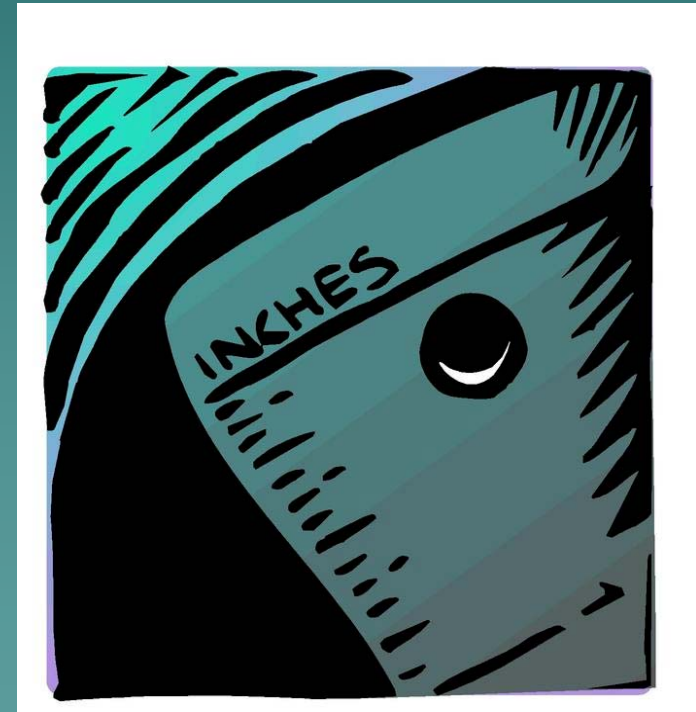
# Flow-Restrictor Bypass. Bad

- ◆ Never store stick in the drop tube.
- ◆ Can cause an overflow.
- ◆ Can damage overflow device.



# Prevention Starts Before Delivery

- ◆ Owner/operator shall ensure:
  - There is enough room in tank before delivery.
  - The **Entire** transfer is monitored.
  - No **Spills** due to overfills.



# Inspection Logs

- ◆ Pre-Delivery Spill Containment Inspection Logs
- ◆ = Spill Buckets
- ◆ Should be **Clean and Dry** prior to a delivery

# Monthly Containment Device Inspection Log

- ◆ Containment Sumps - Turbine Pumps
- ◆ Piping Sumps
- ◆ Should be **Clean and Dry**

# Monthly Dispenser Pan Inspection Log

- ◆ Containment pan located under the Dispenser
- ◆ Should be **Clean and Dry**
- ◆ Is it Water or Fuel?

# Release Detection Monitoring



# Summary of Options

## Common

- ◆ Automatic Tank Gauging
- ◆ Interstitial Monitoring

## Less Common

- ◆ Inventory Control and Tightness Testing
- ◆ Statistical Inventory Reconciliation

## Uncommon

- ◆ Manual Tank Gauging
- ◆ Soil Vapor Monitoring
- ◆ Groundwater Monitoring





# Automatic Tank Gauging



# General Requirements

- ◆ Must test for leaks at least every 30 days.
- ◆ Can detect a 0.2 gph leak.
- ◆ Must be a valid, passing test.
- ◆ Is third party approved for the application.
- ◆ Must have maintenance performed per Manufacturer specifications.
- ◆ Must maintain last 500 months of tests for inspection.
- ◆ 95 % probability of finding a leak and 5 % of a false alarm.
- ◆ Must measure for water monthly.

# Types of Reports

JUN 12, 2001 5:00 AM

## INVENTORY REPORT

T 1:UNLEADED REGULAR  
VOLUME = 8868 GALS  
ULLAGE = 3054 GALS  
90% ULLAGE= 1861 GALS  
TC VOLUME = 8766 GALS  
HEIGHT = 83.26 INCHES  
WATER VOL = 0 GALS  
WATER = 0.00 INCHES  
TEMP = 76.3 DEG F

T 2:UNLEADED PREMIUM  
VOLUME = 2671 GALS  
ULLAGE = 5365 GALS  
90% ULLAGE= 4561 GALS  
TC VOLUME = 2647 GALS  
HEIGHT = 43.82 INCHES  
WATER VOL = 0 GALS  
WATER = 0.00 INCHES  
TEMP = 72.7 DEG F

T 3:DIESEL  
VOLUME = 2696 GALS  
ULLAGE = 7502 GALS  
90% ULLAGE= 6482 GALS  
TC VOLUME = 2685 GALS  
HEIGHT = 37.13 INCHES  
WATER VOL = 0 GALS  
WATER = 0.00 INCHES  
TEMP = 69.2 DEG F

\* \* \* \* \* END \* \* \* \* \*

06-28-01 1:05 PM

## SYSTEM STATUS REPORT

T 1:LOW PRODUCT ALARM

T 1:DELIVERY NEEDED

T 2:LEAK ALARM

T 2:SUDDEN LOSS ALARM

T 3:LOW PRODUCT ALARM

T 3:DELIVERY NEEDED

## INVENTORY REPORT

T 1:DIESEL  
VOLUME = 914 GALS  
ULLAGE = 9086 GALS  
90% ULLAGE= 8086 GALS  
TC VOLUME = 908 GALS  
HEIGHT = 14.12 INCHES  
WATER VOL = 41 GALS

# Types of Reports

OCT 22. 1999 8:00 AM

CSLD TEST RESULTS

OCT 22. 1999 8:00 AM

T 1:DIESEL  
PROBE SERIAL NUM 408247

0.2 GAL/HR TEST  
PER: OCT 22. 1999 PASS

T 2:SUPER  
PROBE SERIAL NUM 408613

0.2 GAL/HR TEST  
PER: OCT 22. 1999 PASS

T 3:REGULAR  
PROBE SERIAL NUM 408244

0.2 GAL/HR TEST  
PER: OCT 22. 1999 PASS

JAN 22. 2002 11:43 AM

LEAK TEST REPORT

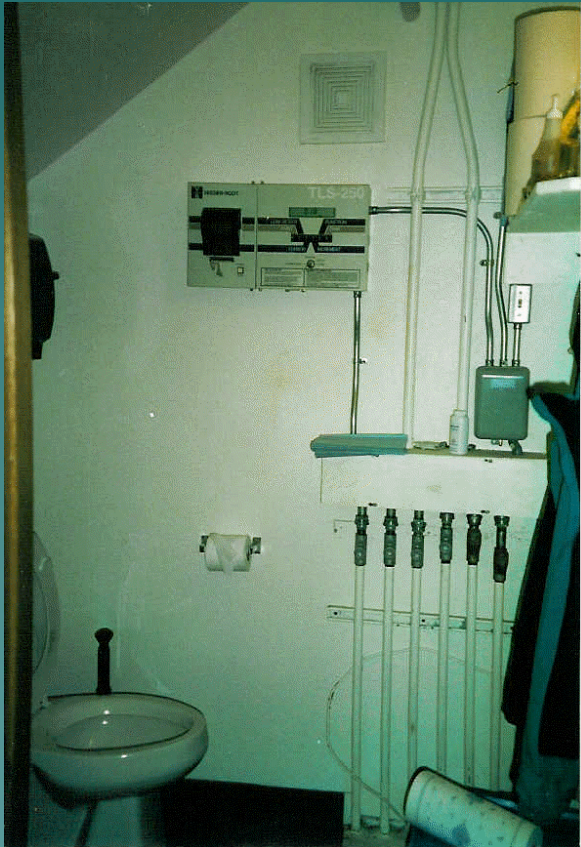
T: 3:REGULAR TANK  
PROBE SERIAL NUM 240331

TEST STARTING TIME:  
JAN 15. 2002 11:00 PM

LEAK TEST RESULTS  
GROSS TEST PASS

\*\*\*\*\* END \*\*\*\*\*

# Find the Tank Gauge



# Statistical Inventory Reconciliation (SIR)

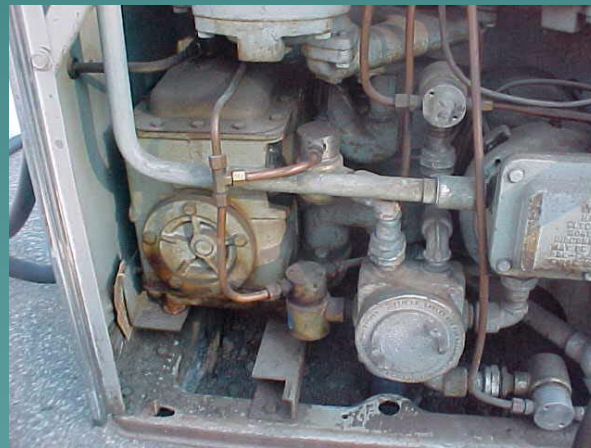
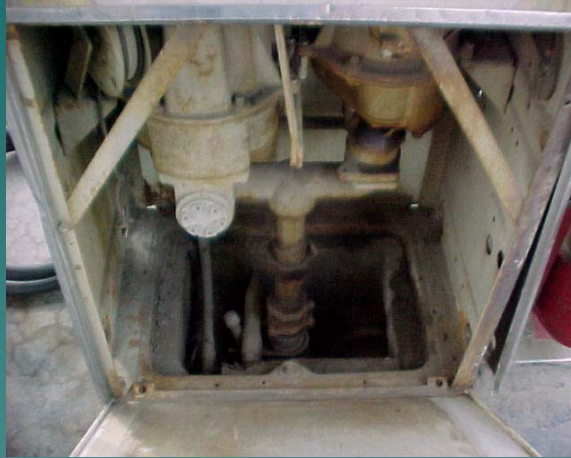
- ◆ Have inventory numbers analyzed by approved vendor each month.
- ◆ Pass/Fail/Inconclusive
- ◆ 2 Inconclusives = suspected release.
- ◆ Must switch to other method if the cause of the inconclusive results is not corrected.

# Leak Detection for Piping

Pressurized

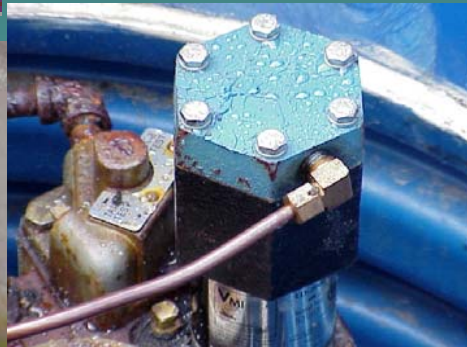
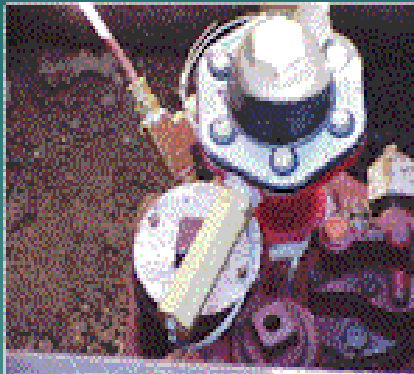
or

Suction?



# ALLD Makes and Models

## Mechanical



## Electronic

### Pressure Transducer



### Wireless



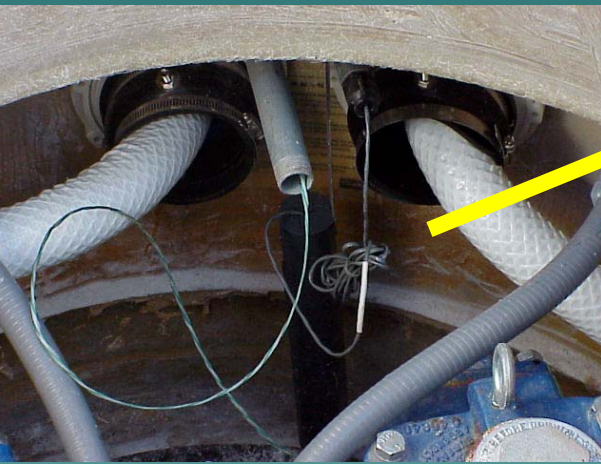


# Mechanical ALLD Testing

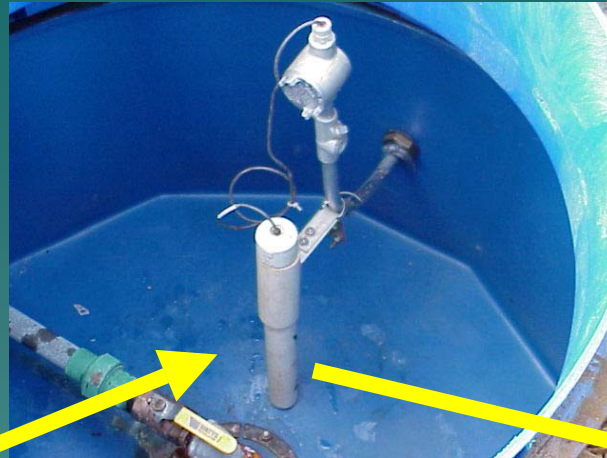
- ◆ Device must be function-tested every year.
- ◆ Use licensed service provider.
- ◆ Idea is to introduce a controlled leak and see if device finds it.



# Interstitial Principles



Double wall pipe with open interstice



Sump and sensor



Gauge with electronic read-out

# Annual Line Tightness Test

- ◆ Hire a UST tightness tester.
- ◆ Have each pipe tested annually.
- ◆ Must get passing test of 0.1 gph leak rate.
- ◆ Keep copy of test results.

	Line 1	Line 2	Line 3
as per test protocol to obtain the test results are? (Pass/Fail)*			
(S) single wall; (D) double wall	S	S	S
(T) turbine; (S) suction	T	T	T
detector present? (Yes/No)	Y	Y	Y
lead seal intact? (Yes/No N/A)	Y	Y	Y
test results? (Pass/Fail)	PASS	PASS	PASS
location? (T) tank (P) pump	N/A	N/A	N/A
leak rate? (in gallons per hour)	0.0	0.0	0.0
test results? (Pass/Fail)*	PASS	PASS	PASS

tanks or piping will not be considered as a valid tightness test for the purpose of detection regulations.

# Cathodic Protection

The image features a solid teal background. In the bottom right corner, there is a stylized, low-poly silhouette of a mountain range in a slightly darker shade of teal. The main title 'Cathodic Protection' is centered in the upper half of the image.

# Requirements

## Sacrificial Systems - Stip3 Tanks

- ◆ System must be tested 1x every 3 years
- ◆ Keep records on site

# Impressed Systems

- ◆ System must be tested 1x every 3 years
- ◆ The Rectifier must be inspected once every 60 days.







- ◆ A steel tank must have a passing Cathodic Test!

# Frequent Contacts

- ◆ UST Compliance & Enforcement - 609-984-5855
  - Northern Bureau, (973) 656-4099: Bergen, Essex, Hudson, Hunterdon, Morris, Passaic, Somerset, Sussex & Warren
  - Central Bureau, (609) 584-4200, Mercer, Middlesex, Monmouth, Ocean & Union
  - Southern Bureau, (856) 614-3655, Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, & Salem
- ◆ UST Registration 292-2728 or 292 2718
- ◆ Discharge Notifications/Complaints  
Call **DEP Hot-Line 1-877-WARN-DEP or 1-877-927-6337**

# Frequent Contacts cont.

- ◆ Regulated Underground Storage Tank 292-8761
- ◆ Homeowner tanks (heating oil) - Case Assignment 292-2943
- ◆ Air Permits - Bureau of New Source Review 292-9258
- ◆ Propane Tanks - Department of Labor 292-1190
- ◆ Septic Tanks/Systems 292-0407
- ◆ ISRA/ECRA 777-0899
- ◆ Radiation 633-2210 Radon 984-5425 Radon Hot-line 800 648-0394
- ◆ Well Searches/Well Permits Bur. Of Water Allocation 292-2957


# Frequent Contacts cont.

- ◆ Homeowner Well Monitoring (Private Well Testing Program) 292-5550
- ◆ Above Ground Storage Tanks
  - local construction, fire and health officials
  - If >20,000 gallons of hazardous substances on-site - DPCC 633-0610
- ◆ Applications for UST Certification/Information About a Certified Firm or Individual 777-1007
- ◆ Variances from the Tech Regs. Or Directions How To Proceed With A Site Investigation Which Has No Case Manager - Set to Case Assignment for Issuance of An MOA 292-2943

# \*websites\*

- ◆ [www.state.nj.us/dep](http://www.state.nj.us/dep)
- ◆ [www.state.nj.us/dep/srp/ust](http://www.state.nj.us/dep/srp/ust)
- ◆ [www.state.nj.us/dep/enforcement](http://www.state.nj.us/dep/enforcement)

John Olko  
Principal Environmental Specialist  
Central Bureau of Water Compliance and  
Enforcement  
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Trenton NJ 08625-0407  
609-584-4200

A stylized silhouette of a mountain range in shades of teal, located in the bottom right corner of the slide.